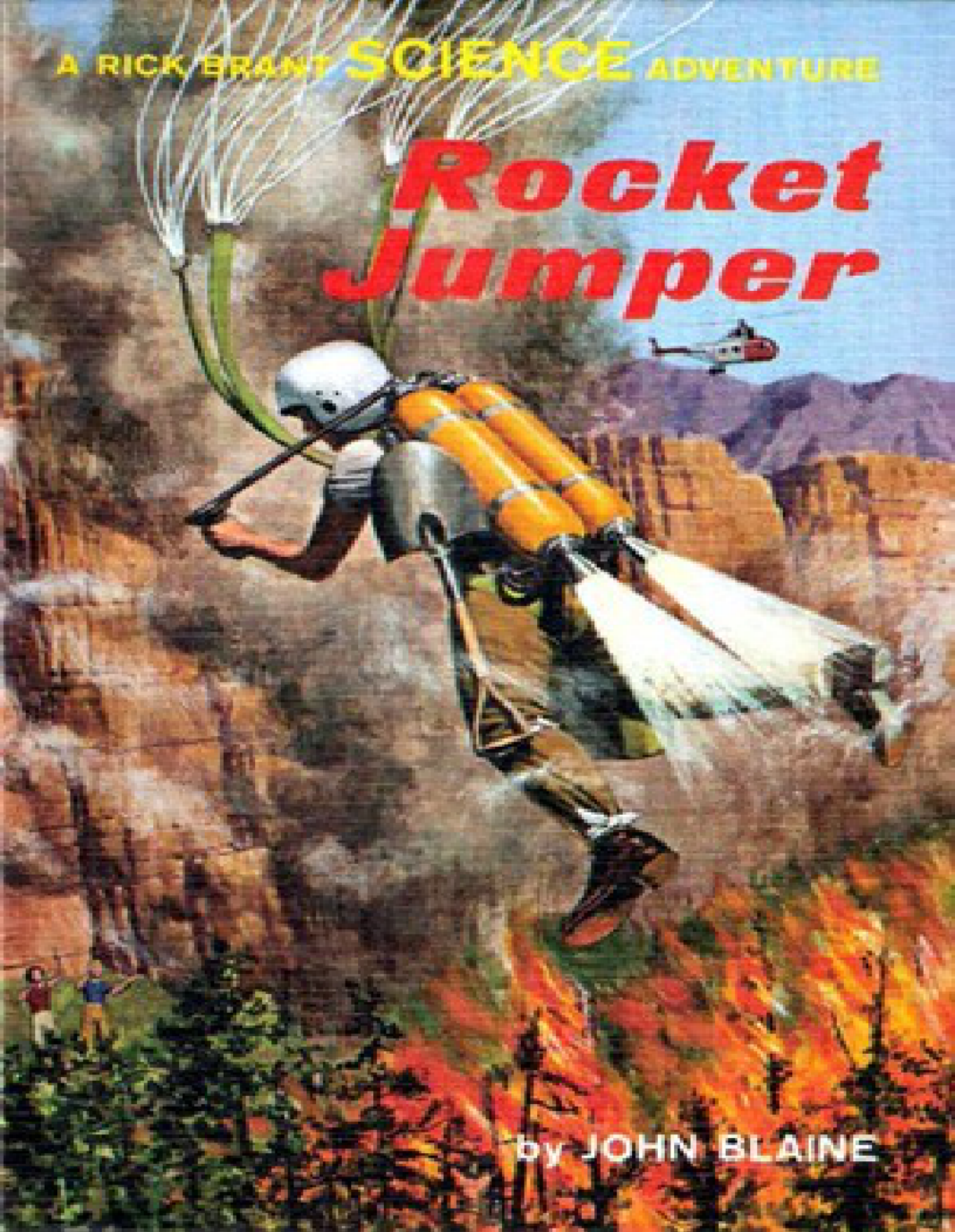


A RICK BRANT SCIENCE ADVENTURE

Rocket Jumper



by JOHN BLAINE

ROCKET JUMPER

A RICK BRANT

SCIENCE-ADVENTURE

STORY, No. 21

BY JOHN BLAINE

RICK BRANT, son of a famous scientist, makes a dream of free flight come true when he fashions a rocket belt in the famed Spindrift Scientific Laboratories. Experiments with the belt are interrupted by summer jobs for Rick and his pal Scotty at a top-secret military project in Nevada .

The boys are assigned to operate a missile tracking station, and to help counterintelligence find the spies who are collecting information about the missile project and selling it to Iron Curtain countries.

A ring of ruthless espionage agents, the inferno of a raging forest fire, a dangerous and daring rocket jump-with the lives of two girls at stake-all go to make this a fast-moving, high-tension yarn of Rick Brant in action.

CHAPTER I

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The Plumber's Nightmare

Rick Brant's feelings were mixed. He felt partly like a human sacrifice, partly like an overloaded camel, partly like an idiot who had fallen into a plumber's warehouse, and partly like an astronaut in his spacecraft waiting for the moment of lift-off.

He was a tall, slim boy who usually moved with the controlled grace of an athlete. But anyone seeing him now would have had a hard time figuring out exactly what he did look like. He was dressed in coveralls over a suit of long Arctic underwear. The coveralls were tucked into high-laced boots. From feet to waist he looked reasonably normal, although somewhat overdressed for a hot June day. But from the waist up he was concealed by an apparatus that seemed to be a senseless maze of plumbing. On his head was a motorcyclist's crash helmet.

Rick couldn't remember when he had been so uncomfortable on purpose. The weight on his back bent him slightly forward, and constricting straps around his chest and stomach prevented easy breathing. He was hot. Sweat matted the hair under his helmet and ran in steady rivulets down arms, legs, and back.

Rick licked his dry lips and looked around, wondering if he seemed as nervous as he felt. His mother, standing with the wives of Spindrift scientists, looked frightened. His sister Barby was obviously excited.

Next to Barby, pretty, dark-haired Jan Miller seemed calm enough, but she was twisting a handkerchief into a shapeless wad.

The Spindrift scientists were calm and detached, as usual. Zircon, Gordon, Weiss, Miller, Winston, Shannon, and Briotti were discussing the latest Rick Brant project in technical terms, talking about thrust-to-weight ratio, specific impulse of monopropellants, and stability of a body moving in six degrees of freedom. Rick gulped. They were talking theoretically, but it was actually his body they meant.

Rick staggered as his father, Dr. Hartson Brant, Director of the famed Spindrift Scientific Foundation, gave a last tug on the back of his

harness. Rick looked over his shoulder. Hartson Brant and Don Scott were making final adjustments.

In a moment Mr. Brant came around from behind with a sheet of paper. "Take places," he called.

"We're ready for the check list."

Scotty handed Rick a handkerchief to mop his dripping face. "Feeling okay, ol' buddy?"

"I'm hot," Rick said truthfully.

"And a bit apprehensive," Hartson Brant added.

"Have confidence in your own handiwork, son. I've checked it thoroughly, and it's a good, sound piece of work. You'll fly like a bird."

Scotty, a husky, dark-haired boy, grinned. "With that Plumber's Nightmare on his back he'll be lucky to fly like a kiwi."

Rick knew that his pal's joking reference to the flightless New Zealand bird was only a way of reassuring him. Scotty didn't joke when he had doubts.

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"Plumber's Nightmare" was a good description of Rick's invention. On his back, upside down, were two tanks that had begun their existence as compressed air tanks for scuba diving. The tanks terminated in bell-like nozzles mounted on swivels. From each nozzle a flexible cable ran up Rick's back and into a pipe welded to the left tank. The pipe extended over Rick's left shoulder, then curved downward to chest level. It ended in a motorcycle handgrip.

From a valve just above each tank nozzle, two other flexible cables ran to a pipe extending over his right shoulder. This pipe also ended in a handgrip.

The whole pipe and tank assembly was bolted to a stiff corset of fiberglass and epoxy resin. Rick wore the corset like a sleeveless, collarless jacket. Under his arms, the corset was padded with molded rubber tops taken from an old pair of crutches. A wide leather belt secured the corset firmly around his chest, and a telephone lineman's safety belt held it to his waist.

Half-inch nylon ropes were tied to safety rings on each side of the safety belt. From a heavy ring welded to the brace between the tanks on Rick's back another nylon rope rose upward to a block suspended from a cable fifty feet over his head. The cable ran from the top of the Spindrift laboratory building to a tall steel tower that had once been the gantry for a great rocket. The nylon rope continued through the block to the ground again, its end held by big Hobart Zircon, a world-famous physicist.

"Let's go," Hartson Brant called.

Jan Miller stepped forward as most of the group moved back. She had put away the twisted handkerchief and now held a sprig of green in her fingers. She smiled at Rick. "I know you're not superstitious, and neither am I, but this won't hurt anything, will it?"

Rick looked from the girl's face to the green sprig. "It won't hurt. It might even help. Thanks, Jan." It was a four-leaf clover. Jan tucked it into his safety belt and stepped back.

"Ground-tie safety lines," Hartson Brant called.

Tony Briotti and Howard Shannon checked the attachment of the lines to Rick's belt, then took position holding the ropes, one on each side of Rick. "Ready," they said in turn.

"Harness safety line," the scientist called.

Hobart Zircon took up the slack on his rope and Rick felt himself lifted from the ground and lowered again. "Ready," Zircon called in his booming voice.

"Harness belts."

Scotty had already checked Rick's belts, but he checked them again. "Ready."

"Crash helmet."

Rick tightened the strap under his chin. "Ready."

"Vector control."

Rick turned the left handgrip. It was a bit stiff, but all right. "Okay here."

Scotty had been checking the movement of the nozzles under the tanks. "Nozzles traverse all right."

Hartson Brant smiled at his son. "Final item, Rick. Thrust control."

Rick turned the right grip and heard the hiss of escaping steam. "Okay here."

Scotty called from behind him, "Both nozzles clear."

Hartson Brant nodded. "Take your time, Rick. The safety lines will hold you, no matter what happens."

"I'll call out at thirty and forty-five seconds. Good luck."

"Thanks, Dad." Rick waited while the group fanned out, leaving him alone in the center of a circle of watchers. The three scientists on the lines were just within the circle of well-wishers.

Rick took a deep breath. Slowly and evenly he twisted the right grip. Steam hissed. As the valves at the bottoms of the tanks slowly opened, liquid hydrogen peroxide began to flow. The liquid struck screens of pure silver wire and instantly exploded into steam. This was the same reaction that had powered the Mercury capsule controls in the early days of the space program, taking advantage of the fact that hydrogen peroxide decomposes instantly upon striking a catalyst of platinum, mercury, or silver, breaking down into a powerful jet of steam.

Thrust built up as Rick opened the valves. He felt the weight on his back lessen as thrust lifted the tanks, then the pressure under his arms as the corset lifted firmly under the thrusting jets.

His discomfort was forgotten now. He balanced carefully, and kept adding thrust until he was on tiptoes, then six inches above the ground. According to plan, he kept the thrust constant and swung his feet slightly. His entire body rocked back and forth. Quickly he stopped the motion, then gave his body a twist. He turned in mid-air, like a trampoline jumper reversing direction, and was astonished at how rapidly and smoothly he moved. He twisted back again, brought himself to his original position, and drew his legs up. Above the noisy hiss of steam he heard the watchers laugh at the sight of Rick Brant sitting, apparently unsupported, above the ground.

He lowered his legs again and increased thrust. He rose slowly to a height of thirty feet, then cut the thrust back just enough to hold that altitude.

“Thirty seconds,” Hartson Brant shouted.

Rick nodded. He was surprised that he had no feeling of height. He had a secret fear of high places, and climbing gave him the willies, but flying his plane gave him a feeling of exhilaration, and so did this new kind of lift.

According to the program, Rick twisted his body and went into a full turn. Below him, Briotti and Shannon ran in a circle to keep the safety lines from tangling. Their job was to keep Rick from rising too high if he lost control of the thrust, and to balance him if need be. But he was balancing easily.

As Rick turned in mid-air he had a panorama view of Spindrift Island . He faced into the cove off Pirate’s Field, then turned toward the back end of the island where tidal flats, exposed at low tide, connected the island to the mainland. Another quarter turn and he saw the farmhouse where the island’s tenant farmer lived, and the neat, plowed fields. Then the big Brant house came into view, and the smaller, newer houses of the married staff scientists. The Atlantic Ocean swept into view beyond the orchard, then the long, low, gray laboratory building. When he was facing out from Pirate’s Field again, he gave his body a **Page 4**

slight twist in the opposite direction and stopped his motion.

“Forty-five seconds,” Hartson Brant called.

Rick nodded to show he understood. Right on the button, in accordance with the practice program. He reduced thrust slightly and began to descend. At about ten feet he increased thrust again and checked the descent. He stayed in place for a five count, then reduced thrust slowly-too slowly, as it turned out. He reached a position three feet above the turf and the jets cut out, all fuel gone. Rick dropped like a lead sinker for a few inches, then the upper safety line caught him. The full weight of the back pack slammed down on his belts and made him grunt.

Zircon lowered him to the ground, and the entire Spindrift group mobbed him.

“It worked!” Scotty yelled, and pounded Rick’s shoulder, oblivious to the fact that he was pounding steel-hard fiberglass.

Barby unbuckled her brother’s crash helmet and lifted it off, then gave him a big kiss. “You flew, Rick!

You really did! It was sensational”

Jan Miller handed him a freshly opened can of ice-cold root beer. “It was wonderful, Rick.”

“The four-leaf clover did it,” he said elatedly.

Scotty was already unbuckling Rick’s harness. Zircon and Hartson Brant supported the heavy load as Rick slipped out of it. They laid it on the ground, and both shook his hand.

Mrs. Brant gave her son a hug. “All right, Peter Pan. You’ve shown us you can fly. Now off to the showers before you collapse from the heat.”

Rick was more than willing, but it was a half hour before his friends and neighbors finished their congratulations, and another half hour before he and Scotty finished cleaning the nozzles to be sure none of the corrosive hydrogen peroxide remained to corrode and clog them.

When he and Scotty emerged from the lab building, Barby and Jan were waiting. Together, the four walked toward the big house facing the Atlantic , past the orchard, past his Sky Wagon four-seater plane.

A shaggy little dog ran to meet him, sniffed his hand carefully, then rolled over and played dead.

Rick scratched the dog’s ribs. One hind leg flailed in ecstasy. “It worked, Diz ,” Rick said. Dismal had been locked in the house during the experiment so that he would not be upset at seeing his young master sail into the air.

“It worked like a dream,” Jan added.

“I can hardly wait to try it myself,” Scotty said.

Barby looked at her brother anxiously. “You’ll let Jan and me try it, too, won’t you, Rick?”

“As soon as all the bugs are ironed out and I’ve learned how to work it safely,” he promised. “One control is still a little stiff. I’ll have to smooth it out.”

“What will you call it?” Barby asked.

Rick hadn't thought about a name. He had referred to it only as "the rocket belt." He asked, "Any ideas?"

"How about Rick Brant's Bird Belt?"

Scotty objected. "Sounds like something to tie dead ducks onto."

"Call it the Ribroc," Jan suggested. "Short for Rick Brant's Rocket Corset."

Rick chuckled. "Nope. Scotty had the right name for it-Plumber's Nightmare."

No matter what it was called, it worked. That was all that really counted. Rick was already looking ahead to the next steps. Another tethered flight for control practice after lunch, and a third tethered flight in the morning. Then-if all went well-the first free flight tomorrow afternoon. He could hardly wait.

CHAPTER II

Free Flight

Spindriftisland , off theNew Jersey coast, was the only home Rick Brant remembered. He had been born on the mainland, and so had Barby, who was a year his junior. But Hartson Brant, seeking a quiet place in which to do original research, had found the island and purchased it.

Rick's earliest memories were of playing on the beach at Pirate's Field on the south shore of the island while his father sat on the bank with pad and pencil and worked out the fundamental theory that had helped to open the age of electronics.

Later, Hobart Zircon and Julius Weiss had come to the island to work with Hartson Brant, and had stayed. By then Rick's own bump of curiosity had grown large, and the three distinguished scientists had encouraged it, taking time to answerhis questions-usually with questions of their own that forced him to think and to arrive at an answer himself. A daring space project, launched from Pirate's Field, had won a grant that resulted in creation of the Spindrift Scientific Foundation. The staff expanded during various projects, and new houses were built to accommodate them, although Zircon and Weiss still lived in the big old main house.

Now the Foundation was well established and world famous. Rick had literally grown up with it, taking part in projects and expeditions when not in school, and always getting help from the scientists on his various projects.

The rocket belt was the latest in a long line of Rick Brant experiments. He planned to get an early start on next fall's high school science project-and he had succeeded beyond his wildest expectations, thanks to some enthusiastic assistance from the staff scientists. The assistance was perfectly fair, since it had been in the form of advice and help with computations, but the project was practically finished before the summer season was well under way.

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The belt wasn't an original idea with Rick. The first rocket belt had been built by a scientist at Bell Aerosystems . Rick had read about it,

and began dreaming of one of his own. The question was, could a rocket belt be built with ordinary tools and equipment? He planned to call his project "Design and Operation of a Homemade Personal Rocket Lifting Device."

Rick had learned a lot, very quickly. He grinned when he thought of his first design. He had planned to use two tanks, one for kerosene and one for liquid oxygen, and by really poring over some of the technical data in the Brant library, he had satisfied himself that it would work.

Hobart Zircon went over the design with him, then looked at Rick quizzically.

"It will work, won't it?" Rick asked.

"Indeed it will," Zircon boomed. "Like a Saturn with eight engines flaming. It will get you at least one foot off the ground. Maybe two."

Rick started in disbelief. "My figures can't be that wrong."

"Oh, your figures are all right, as far as they go, but you haven't calculated the payload properly. You've allowed only your own weight."

"But what other payload is there?" Rick demanded. "I'm not going to carry anything heavy."

"How about your water supply? I estimate it will take about fifty gallons."

"For what?" Rick demanded.

"How do they cool the launch pads at Cape Kennedy when a kerosene-oxygen rocket takes off?"

The light dawned. "With water," Rick said unhappily. "Thousands of tons of it, pouring like Niagara Falls

."

"Yes. And that's what you'll need to cool the seat of your pants when that rocket blowtorch hits. Only in smaller quantity, of course."

Rick sighed. "Well, back to the old drawing board."

"Take a different tack, Rick. A burning bipropellant isn't the answer. You need a monopropellant that produces thrust by decomposition.

The heat production is less. And another thing. Your thrusters shoot straight down at the seat of your pants. Angle them outward.”

“But it will be less efficient,” Rick protested.

“And also cooler. You’d need only a little padding, not asbestos shorts and a hip-pocket cooling system.

So you’ll gain in payload weight what you lose in efficiency.”

Rick settled finally on hydrogen peroxide as a propellant, although there were other possibilities. The reason was a practical one. He could buy peroxide. He couldn’t buy the others. The rocket belt was designed around the common chemical, and the tanks allowed one minute of flight. He could have purchased larger tanks, but there was a limit to the weight he could carry. The fully fueled belt finally ended up weighing one hundred and twenty pounds. It had to be lifted onto his back, although he could **Page 7**

support it once the harness was in place.

Most of the rocket belt was built from readily available materials. The hardest part was machining the nozzles and swivel parts, because they had to be made of stainless steel—as did the tanks. The corrosive peroxide would wreck anything less durable. Now the belt was finished, most of the work was over, and the fun was beginning.

Rick made his tethered flights on schedule, with the scientists as flight crew. After the third flight he disassembled the sticky handgrip before lunch. As he worked, his tension grew. Flying the rocket belt with safety lines attached was one thing, but free flight was something else. He was confident the belt would work, and that he could fly. But ... it was an awfully big *but*. If he lost his nerve and his balance for one second, he could crash, maybe jet-propelled. The secret was in how he moved his body, because control of the belt was strictly a matter of body balance. The swiveling nozzles controlled the direction of thrust, but could not help in keeping him stable. Only body balance could do that.

After lunch, at his mother’s insistence, he went to his room and stretched out. He knew she was right.

He would be more relaxed if he could rest, but he was sure rest was impossible. He could only go through the motions.

To his own astonishment, he fell into a dreamless sleep, and awoke an

hour later with Scotty shaking him. Rick sat up and blinked. Scotty was in scuba gear, needing only the tanks and regulator to complete the diving-gear-advertisement-look that the mid-season swimsuit and helmet gave him.

“The gang’s at the beach, Rick. Let’s go.”

He was on his feet in an instant. “Okay. Be there in five minutes.”

He splashed water on his face and ran a comb through his hair, then got into his padded Arctic underwear, jumper, and boots. He grabbed his crash helmet and hurried to the lab. Hartson Brant was already dressed in a coverall of clear plastic, ready to help with fueling.

Rick took another coverall and climbed into it, then he and the scientist put on plastic gloves and headgear. They added plastic goggles, and ended up looking like creatures from another planet. The outfits were necessary in case any of the highly corrosive peroxide spilled.

It was hot in the protective garments. Rick spoke through the filtered mouthpiece of his head cover.

“Ready.”

There were two large tanks in the lab room assigned to Rick for his experiment. One was filled with the hydrogen peroxide, and the other with nitrogen.

Hartson Brant connected a line to the nitrogen tank, then opened a valve atop the tank slightly and let the nitrogen drive normal air out of the line. While the nitrogen still hissed through, he connected the end of the line to an inlet valve on top of the peroxide tank. The pressure of the nitrogen would drive the peroxide into the belt tanks.

Rick, meanwhile, connected one end of another line to a valve just above the nozzle on one belt fuel tank. He had left the belt with its tanks full of nitrogen. Now he opened the valve and let the nitrogen clear air from the line, then he connected it to the outlet valve on the peroxide tank.

Filling the rocket-belt tanks with nitrogen served two purposes. First, the inert gas prevented any small **Page 8**

amount of peroxide still in the tanks from corroding the metal. Second, when the peroxide flowed into the fuel tanks, it would

compress the nitrogen, which was now only slightly pressurized. The compressed gas would then help to drive the peroxide from the tanks again during flight.

Rick knelt next to the belt and signaled. Hartson Brant opened valves and the peroxide flowed until a gauge on the peroxide tank told him the pressure was equal on both sides of the line-in peroxide tank and fuel tank-and no more fuel would flow.

“Ready, Rick.”

Rick opened the valve on the other tank, then swiftly disconnected the fuel line and slapped it in place on the valve. He had practiced it so often without fuel flowing that only a drop of peroxide escaped. As Hartson Brant opened his valve again, Rick dropped a water-soaked sponge on the spot. He squeezed, and the water diluted the peroxide to a safe mixture, not unlike that used for an antiseptic-or to turn a brunette to a blonde.

Rick had marveled at the versatility of hydrogen peroxide. In a 90 percent mixture it could drive a rocket. In mixtures of only a few percent peroxide and water, it could serve as an antiseptic or bleach. It could corrode flesh, or heal it, all depending on how much water was mixed with it.

When both fuel tanks were full, he rechecked all valves, swished a wet mop across the concrete floor to catch any peroxide that might have spilled unnoticed, then got out of his plastic protective outfit. Hartson Brant was already free of the clinging garment and wiping his face.

Together, they lifted the belt into the wagon Rick had modified for lugging his scuba gear around, then pulled it through the lab door and started for the beach.

Scotty was already in the water in his scuba gear. Hobart Zircon was waiting offshore in one of the island's two motorboats, and Tony Briotti was just coming around the cliff below the lab in the other one.

The Spindrift family of scientists and wives were waiting on the beach. They called their wishes for good luck to Rick, but stayed out of the way.

Mrs. Brant gave her son a hug and, after the fashion of all mothers, said unnecessarily, “Be careful, Rick.”

“I will,” he assured her.

Scotty came out of the water and removed his swim fins. Zircon and Briotti nosed their boats into shore.

Shannon and Winston went to join them while Scotty and Hartson Brant lifted the heavy belt for Rick to put on, then checked everything carefully while he buckled in.

Barby was carrying the one extra piece of equipment he needed for the flight. It was a razor-sharp Swedish hunting knife that could cut through the heavy leather belts, like a wire going through soft cheese.

She snapped the knife sheath into place, handy to his right hand, then gave him a quick hug. She didn't say anything.

Rick winked at her affectionately. He and Barby often fought like cat and dog-or brother and sister-and he teased her unmercifully now and then. But secretly he was very proud of his sister. She was smart, and she had nerve. And when anything serious was afoot, she was 100 percent in his corner, and no questions asked. He knew Scotty and Jan were on his side, too, all the way. No matter how much they **Page 9**

might disagree among themselves-and sometimes the disagreements were pretty outspoken-they were a loyal, close-knit group. The same was true of the whole Spindrift gang.

Jan waited until Barby had attached his knife, then she handed him something soft and furry. "I'm not superstitious, Rick, and neither are you, but . . ."

"It won't hurt and it might help," Rick finished. "Thanks, Jan. I'll bring it back dry and unharmed."

"Be sure you do," she said, then walked away with Barby.

Rick looked at the rabbit's foot and tucked it into his belt. If only it worked as well as the four-leaf clover.

"Check list," Hartson Brant said.

It was shorter, because no safety ropes were involved. Scotty checked the movement of the nozzles and made sure they were clear, then ran for Zircon's boat while Hartson Brant rechecked harness and safety helmet.

"Ready, Rick."

Feeling like the famous Sinbad with the Old Man of the Sea weighing him down, Rick walked to the edge of the water.

Tony Briotti, with Shannon aboard, was already a hundred yards out from the beach, drifting slowly.

Zircon, with Winston and Scotty aboard, headed out to a station a hundred yards seaward of Briotti.

Scotty was pulling his flippers on.

Hartson Brant produced a pistol from his pocket. It was loaded with blanks. "Stick to the flight plan, Rick. I'll signal at fifteen-second intervals."

"Okay, Dad."

Rick wiped moist palms on his legs, then gripped the handgrips firmly. "Say when."

The scientist had his stopwatch ready. "Any time, Rick. Good flying."

Rick took a deep breath and slowly opened the throttle. Thrust built rapidly, to the accompanying screaming hiss of steam. The tanks lightened, and the crutch tops lifted under his armpits. He kept thrust building and lifted from the sand. He kept the ascent steady until he estimated thirty feet altitude, then throttled back just enough to hold himself there. He experimented with body balance, and found it was not difficult to change direction or position if he didn't move too abruptly or hard.

A shot sounded. Fifteen seconds. He turned the left grip and the nozzles swiveled upward. Rick increased thrust slightly, then added more as he began to lose altitude. He drifted outward from the beach, added thrust, and picked up speed.

It was great! As Barby would say, it was the greatest thing since peanut butter. He saw the boats in position to make a run for him if he dropped into the water, and in a sudden moment of insight he knew they would not be needed. He was master of his gadget!

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He slowed his speed and came to a hovering position above the water. The gun sounded. Time half gone. With a twist of his shoulders he turned around, facing the beach again. Both hands moved and he sped

back to position over the beach, arriving with seconds to spare. He used them to make a complete circle over the heads of the watchers, knowing that he was violating the program plan, but confident enough to do it.

The gun sounded. He didn't check his forward speed, but decreased thrust smoothly. It was like a slow-motion jump from a second-story window. When five feet above the sandy beach, he lowered the thrust nozzles again and his descent became vertical. He checked it to almost zero, and landed like a feather. Perfect! He let out a wild yell of sheer delight. The Plumber's Nightmare was a complete success!

CHAPTER III

Expedition to Excitement

Parnell Winston was a big man with bushy black eyebrows, like furry awnings over a pair of exceptionally keen eyes. His field was cybernetics, and he was a famous specialist in design and operation of control systems, whether for big rockets or microminiature gadgets.

He congratulated Rick on the successful free flight, then added, "I'm having a small meeting in the library in thirty minutes. Can you and Scotty join me?"

"We'll be there," Rick agreed, and Scotty nodded.

As the boys cleaned and stowed the rocket belt, Rick wondered aloud what Winston had in mind. The last time the scientist had called a meeting, Rick and Scotty had ended up in Egypt, where they had become involved in the adventure of *The Egyptian Cat Mystery*.

"It's probably something simple, like automating your rocket belt to fly without a passenger," Scotty said with a grin.

"There's nothing like finding out," Rick said. "Let's move a little faster."

They finished putting everything in its place, and Rick rechecked the fuel and gas cylinders to be certain the valves were fully closed. He noted there was only enough peroxide for one more flight. Tomorrow he and Scotty would have to go to the chemical supply plant near Newark to get some more.

Barby and Jan were waiting on the Brant front porch overlooking the Atlantic.

"Can you fly us to Whiteside?" Barby asked.

"Maybe. But first we have a meeting with Winston."

"I knew it," Barby said grimly. "I just knew it, Come on, Jan. We're going to that meeting, too."

"We weren't invited," Jan replied gently.

"We will be," Barby said. "Leave it to me."

Winston was not alone. John Gordon, who had been home for a week on leave from his rocket and missile work in Nevada, was waiting too. The boys walked into the library and took seats.

Rick watched the door. Sure enough, Barby and Jan appeared. They didn't enter, though. Barby just leaned against the doorframe and Jan took up a position slightly behind her. Rick smothered a grin. He knew precisely what his sister had in mind.

"We have a project," Winston began. "I'm going out to Nevada with John."

"To Scarlet Lake?" Scotty asked.

That was the rocket and missile test range where the two boys had worked with Gordon one summer, and Rick had gotten an unexpected rocket ride, compliments of a criminal who called himself "The Earthman."

"Not Scarlet Lake this time," Gordon replied. "My part of the project is at a new area near Indian Springs. Parnell's is at Jackass Flats."

Rick sat upright. Jackass Flats, within the Atomic Energy Commission's Nevada Test Site, was where nuclear reactors for space propulsion were tested.

"Do you want us?" Rick demanded.

"We do," Winston agreed. "If you're willing to go."

"We're willing," Scotty said instantly. "How do we do it?"

"Lomac is the contractor," John Gordon explained. "I've already talked to them, and they'd be delighted to have you back. Your job would be to run one of the remote instrument stations."

The boys had worked for Logan and Macklin, general contractors, on the last trip to Nevada. The firm was known as Lomac among the rocket personnel at Scarlet Lake.

"Would we live at the test site or Indian Springs?" Rick asked.

"Neither." Parnell Winston avoided looking at the girls in the

doorway. "I thought we'd all take cabins at Aspen Lodge. It's cooler on the mountain at night."

There was a sound of suppressed fury from the doorway, then Barby marched into the library. She faced Winston.

"Dr. Winston," she said with false calm, "I wish to remind you of something."

Winston's blue eyes met the girl's angry ones. He looked innocent as a shaggy puppy. "Of course, Barbara. What is it?"

"In this very room," Barby stated emphatically, "when you were taking the boys to Egypt, you promised **Page 12**

that the very next expedition you were on would include Jan and me."

Rick remembered very well, and he knew Winston did, too. Furthermore, he knew the scientist did not make promises lightly.

"I certainly did say that," Winston agreed. "But you must recognize my dilemma."

"What dilemma?" Jan asked from the doorway.

"I would like to take you, but I must consider my responsibility. You are, very obviously, two quite lovely young ladies."

It was a statement with which Rick agreed, but he thought to himself, "Flattery will get you nowhere this time, Dr. Winston."

However, it had thrown Barby a little off-balance. She said, a bit uncertainly, "We do appreciate the compliment, don't we, Jan? But what does that have to do with taking us?"

"Extremely low humidity and strong winds, plus heat over a 100 degrees, are very bad for complexions.

How would I ever forgive myself if I brought you back looking twenty years older?"

"And that's not all," Gordon added. "Add rattlesnakes, lizards, horned toads, perpetual dust."

"All this plus Las Vegas?" Jan asked. She was quite serious, except that Rick saw the twinkle in her dark eyes.

“Very wicked place,” Winston reproved. “Not for young ladies. Suppose you developed callouses from pulling slot-machine levers? Or became addicted to gambling?”

“We can’t gamble,” Barby said reasonably. “We’re too young. Dr. Winston, you promised!”

A new voice broke in from the doorway. “He certainly did, Barby, and we’re going to hold him to it.”

Kate Winston, the scientist’s attractive young wife, stood there with Back’s mother.

Barby could hardly believe her ears. She looked at Winston warily. “Are we going to hold you to it?”

Winston shrugged. “If you insist on facing the perils of the desert plusLas Vegas , who am I to hold back?”

“Besides,” Mrs. Winston contributed, “I’m going, too, and both your mothers have already given permission.”

Barby ran across the room and hugged her mother, Jan, and Mrs. Winston, then hurried back and gave both scientists a kiss. Then she whirled to face Rick. “You knew about this and never said a word, you

.

. . you . . .”

Bick held up a hand. “Stop. I didn’t know a thing, and neither did Scotty.” He didn’t really mind, either.

The girls wouldn’t be able to work, and that meant they wouldn’t be in his hair or Scotty’s by day. They would spend the days swimming, or horseback riding, or maybe sailing onLake Mead . He knew they would enjoyNevada . Not long ago he would have shuddered at the idea of his unpredictable sister joining a project expedition, but Jan had been a steadying influence, and Barby was growing up. She and

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Jan were kind of fun to have around-sometimes.

“When do we go?” Jan asked.

“Next Monday. That gives you four days to pack everything you want to take into one suitcase.”

Winston winked at the boys.

Barby didn't see the wink. 'Impossible,' she said flatly. "Both clothes for Las Vegas, and for the desert?"

In one suitcase?"

"Stop teasing Barby," Mrs. Winston ordered firmly. "Don't worry, girls. You'll have plenty of room and still be within airline weight."

Winston nodded. "She's right, Barbara. I'll stop teasing. You and Jan get together with Kate and work things out."

Hick had an idea. "Why couldn't Scotty and I fly out in the Sky Wagon? That would give us an extra couple of hundred pounds." He could even take the rocket belt. Maybe some of his old friends at Scarlet Lake could give him some ideas on improving it.

"No reason why not," John Gordon said. "I can get permission for you to land at Indian Springs."

Rick grinned. He loved to fly, as did Scotty. He had learned through a government program for young people, and had then bought his first plane, a Cub, by selling shares in his delivery service to the staff scientists. He ran errands for them to the mainland, acted as a taxi service, and generally made himself useful with the little plane. When it was wrecked, as related in *Stairway to Danger*, reward money had enabled him to buy the bigger, faster Sky Wagon.

"Don't stint on clothes," he told the girls. "We'll carry the extra stuff for you."

"Then it's settled," Winston said. "By the way, Rick, I forgot to give you a message. A call came in for you while you were still at the lab. Phone this number." He handed a slip of notepaper to the boy.

Rick looked at the number, then ran for the phone. Scotty saw the intent look on his face and asked,

"What is it?"

Rick read him the number. Scotty whistled. "JANIG," he said softly. "That's Steve Ames's private phone number."

JANIG was the Joint Army-Navy Intelligence Group responsible for protection of secrets in certain American installations at home and

abroad. Spindrift's scientists, and both boys, had worked with Steve Ames, one of the top agents, on several occasions.

Rick dialed the Washington number directly. In a moment Steve answered.

"This is Rick, Steve."

"Let's scramble."

Rick threw the switch that turned the conversation into electronic gibberish for the benefit of any wiretappers. "Just got your message, Steve."

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"Lomac sent in a request for confirmation of security clearances for a pair named Brant and Scott. Does that mean you're going to Nevada again?"

"Yes. We just found out, Steve. Gordon and Winston are here."

"Mmm. Gordon will be working at the new plant near Indian Springs. Will you be with him?"

"That's right."

"Good. Keep your eyes and ears open. I can't give you anything definite, because I don't have it. But information has been leaking out of that project. Can do?"

"Can and will," Rick agreed.

"Good. Locate Captain Aster. He'll be your contact."

Rick acknowledged the instructions and hung up. He turned and met the interested glances of his friends.

"Steve wanted us to know Lomac had asked for confirmation on our security clearances," he explained.

"He asked if we'd keep our eyes open as usual. Just routine."

He should have known better than to withhold anything. The excited eyes in the two pretty faces before him said clearly that the girls knew there was more to it than that. For them, this had just become more than a trip, it had become an expedition to excitement.

Rick suddenly wished the two weren't going. He and Scotty could operate better alone, and there was always the possibility of danger to two headstrong young females. But it was too late. They were committed. Barby and Jan would go if it meant walking all the way.

CHAPTER IV

Aspen Lodge

Rick Brant oriented himself by the radar installation that sat like a huge soap bubble atop Charleston Peak, then banked the Sky Wagon slightly northward to pick up Aspen Lodge. According to the map John Gordon had marked, the lodge was on the northeast shoulder of the range just above the lower edge of the timberline. The timber was a mixture of pines and aspens.

Scotty, who held the map on his knees, pointed to a twisting dirt road two thousand feet below. "That must be the access road."

Rick followed the twists and turns with his eyes until the road entered the timber, leaving the desert behind. He caught a glimpse of a red roof, and sideslipped to lose altitude.

"Bumpy," Scotty commented as the plane bucked and bounced.

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Rick adjusted his trim tabs. "It always is in this area," he replied.

The hot air from the baking desert rose in a maze of currents which roughly followed the contours of the land. Above the mountain range, the hot desert air swept upward, mixing with the cooler air from the forests. Turbulence was always heavy.

Scotty counted aloud as the cabins in the timber came into clearer view. "One large, four-no, five-smaller ones. Fits the description." He focused binoculars on the terrain below. "Hey, they must have heard us. I see the girls and the Winstons."

The Spindrift party had flown to Las Vegas the day before, while Rick and Scotty had taken three days for the trip, flying the southern route to avoid crossing the high Rocky Mountain passes. They had left Albuquerque at dawn on the last leg, and it was not yet noon. Rick was satisfied. The trip had been smooth and comfortable.

Rick saw the group below and waggled his wings, then swung in a wide curve toward Indian Springs.

Either Gordon or Winston would meet them at the Air Force field.

Rick turned to the radio frequency Gordon had given him and picked up his microphone. "This is Lomac Fox How Four." To save clearance difficulties, Gordon had also arranged for Rick's plane to be given a Lomac identification number, FH-4. "Indian Springstower, this is Lomac Fox How Four."

The tower responded at once. "Lomac Fox How Four, this is Indian Springs tower."

"Request permission to land," Rick said. "We are approaching on a heading of 354 degrees, about ten miles from tower."

"Roger, Lomac Fox How Four. Use runway four. Wind is 5 knots, 15 degrees. No other aircraft in your vicinity. A Lomac follow-me jeep will pick you up."

Rick acknowledged, then added, "This is the first time into your base. Request permission to circle the field once for orientation."

"Roger, Lomac Fox How Four. Check in again when you get into the landing pattern."

Rick acknowledged, then throttled back to lose altitude for the landing. Scotty pointed ahead. "On the button. There's the field."

"Got it." Rick dropped to a thousand feet and held the plane on course until the field was almost below, then banked in a circle around it. The boys watched with interest. It was not a big installation, but it had one long runway that extended into the desert for a good two miles. The other runways were normal.

From his chart and from the huge number painted in white on its end, he identified the runway he was to use.

Most of the buildings were on the highway side of the installation, but one long, low, obviously new aluminum shed was set off by itself. As he passed over, he saw that it was completely surrounded by its own high, chain-link fence. His pulse quickened. That was where he and Scotty would work. In front of the new building was a helicopter pad on which four choppers sat, rotor blades drooping like hound-dog ears.

Rick completed the circle and lined himself up with the runway. He contacted the tower, then cut the **Page 16**

throttle and the Sky Wagon dropped into its approach.

“Wheels down and locked,” Scotty reported.

“Okay.”

In a moment the plane touched down lightly, and Rick let it roll to where a jeep was waiting on the taxiway. He swung in behind the jeep, which had a huge sign mounted on a frame. Lomac, and, in even larger letters, FOLLOW ME.

The jeep led them toward the cluster of buildings on the highway and turned them over to a ground man who directed Rick into a hardstand next to a building that bore the Lomac identification. Two other small planes were already there. As he killed the engine and locked the brakes, John Gordon walked toward them with a welcoming grin.

The Spindrift scientist had arranged everything. The boys checked in, were entered on the payroll and told to report in the morning, signed the security forms and had then: pictures taken for badges.

“Tomorrow morning we’ll start with a project briefing,” Gordon told them, “then turn you over to the section chief who’ll be your boss. His name is Ray Harmon, and he’s an electronics engineer we borrowed from the Pacific Missile Range. Better get here by eight o’clock, which means you’ll have to leave the lodge by seven-thirty at the latest.”

“Won’t you be with us?” Rick asked.

“No. My quarters are here on the base. But I’ll be seeing you after hours, too—now and then. Tonight I’m the duty officer, so take my jeep and head for the lodge. Tomorrow we’ll requisition you some wheels of your own.”

The boys unloaded baggage from the plane and into the scientist’s jeep, leaving only Rick’s rocket belt.

They locked the plane and headed south along Route 95. Scotty was driving. As he picked up speed, a panel truck passed them heading toward the Indian Springs gate. It was painted a distinctive shade of pink, and on the side in foot-high letters was: THE JONES BOYS. A cartoon depicted a grinning workman in hardhat with an enormous sandwich in one hand and a bottle of soft drink in the other.

“Something new on the Nevada scene,” Rick observed. “Looks like a portable lunch wagon.”

Scotty chuckled. “With sandwiches at prices suitable for a robber gang.

Do you suppose they're descendants of Frank and Jesse James?"

Rick remembered Las Vegas prices from their previous trip. "Isn't everyone out here?" he asked.

They turned off Route 95 onto Route 52, which, if followed to the end, would lead them into Death Valley. The road climbed steadily, and began to twist and turn as they approached the top of the Charleston Range. A wooden sign at a turnoff directed them to Aspen Lodge, and they swung into a one-way dirt road, made one way by its narrowness. Now and then they passed a turnout. If two cars met between turnouts, one would have to back up.

The road, little more than a cart track, climbed steadily until they were in the timber. Tall pines were mixed with stands of aspen, and it was cool in the comparative shade. Then the path turned through a thick grove and they were suddenly at Aspen Lodge.

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Barby and Jan had been waiting. They jumped to their feet and vaulted over the low porch railing on the front of a small cabin—a feat made possible by wearing riding pants and white shirts that Rick recognized as his. No wonder he had been short of shirts when he packed.

Scotty drove to meet the girls, who immediately climbed aboard and directed him to the most distant cabin in the row of five. "That's where the Winstons live," Barby explained. "They're waiting with cold drinks."

While the girls chatted excitedly about their trip, Rick surveyed the lodge. It was quiet, clean, and very nice. He saw that it was situated on a kind of wooded bench on the mountainside. Below the lodge, the mountain dropped away to the desert slopes. Above it, the mountain climbed steeply toward a rocky peak.

The lodge property consisted of the main building and the five cabins. The cabins were on a kind of lane in front of the main structure. Next to the one nearest the big building he saw a duplicate of the Jones Boys panel truck they had passed.

The cabins were sheathed with pine logs, the bark still in place. Each had a small front porch and a natural stone chimney that indicated a fireplace inside. Rick was pleased. The effect was nice. He saw that a swimming pool was situated just behind the cabins. It wasn't a big

one, but it was adequate.

The Winstons greeted the boys warmly, and Mrs. Winston poured fresh limeade which they took gratefully. But Barby couldn't wait for them to drink it all.

"Bring your glasses with you," she directed. "Well show you your cabin."

Outside, Barby pointed to each of the cabins in turn. "That one on the end belongs to the Jones Boys.

They have two lunch wagons, and they sell food and stuff to the workers at the bases around here. The next cabin belongs to Mr. and Mrs. Carstairs . They're elderly people, and they spend all their time in the woods taking movies of birds and animals. The one in the middle is yours, then comes ours, and the Winstons are at the other end. Come on, we'll show you yours."

Jan led the way, and held the cabin door open with a flourish. "We hope you like it."

Rick and Scotty stepped in, followed by Barby. Rick's glance swept the room. Although anyone not knowing him would have assumed he hadn't really seen much, the training he and Scotty had received from Steve Ames of JANIG registered every detail. He could have drawn a very accurate sketch of the room and everything in it.

It was a single, large room, with two day beds against opposite walls. The fireplace was large enough for good-sized logs and occupied most of the back wall. A pair of natural pine dressers stood on each side of the entrance door. In the middle of the room was a round oak table and four chairs. Two comfortable chairs with reading lamps flanked the fireplace. Across the back corner to the right of the fireplace hung a curtain. Rick lifted it and saw that it concealed a small refrigerator, cupboards, a work-table, and a two-burner alcohol stove.

The walls of the cabin were smoothly plastered and hung with Indian rugs, a pair of deer antlers, an ancient powder horn, and a peculiar-looking stuffed animal head with horns. But Rick's eyes were attracted to a pair of framed photographs on the fireplace mantel. He grinned. They were photos of Barby and Jan looking their most glamorous, which, he admitted, was considerable. The pair were **Page**

duplicates of those on his father's desk at home. They might even be

the same ones.

"I see we have pictures of the native inhabitants," he said.

Scotty inspected the photographs closely. "Interesting types, aren't they? Notice the low foreheads and beady eyes. The cephalic index seems to be about the same as that of the famous Caledonian knothead tribe. But the ear ornaments puzzle me. Probably cheap trade goods."

Rick nodded soberly. "I imagine they traded rabbit skins for those."

Barby stamped on his instep. It hurt, and Rick yelled, "Hey! Cut it out."

"Native girls short-tempered," Barby said. "Kick big white brother in shins. Seriously, those pictures aren't just so you can admire our beauty-although you can if you want to."

"No," Jan added. "They're to remind you that we're here, and if the two of you go traipsing off without us, it's going to mean trouble."

"We want you to promise something," Barby said firmly.

Rick looked at her suspiciously. "What?"

"Well, we know you have to work, and that you'll probably do your stuff for JANIG on the job. But we want your promise that after working hours, you'll include us. In everything."

Rick considered. He wouldn't promise lightly, because he kept his promises, and Barby knew it. Steve Ames hadn't really given them an assignment. He had only asked them to keep their eyes open. It was highly unlikely that they would be doing anything about the information leaks after working hours. Even so, he had to allow for the possibility. His eyes met Scotty's. Scotty shrugged.

"I can't give you a blanket promise," Rick said at last. "We can't be sure what may happen. But I'll promise this much: we'll include you whenever we possibly can, and I expect that will be just about all the time, or at least most of it."

"Does that mean whenever you see a little excitement ahead you won't include us?" Jan asked.

Scotty took a hand. "He doesn't mean that at all. Only sometimes we

may have to take off directly from work and go somewhere. I don't know, and neither does Rick."

Rick remembered one such trip into the desert, when he and Scotty had found themselves stranded in a ghost town. Good thing the girls hadn't been along then. "Take it just as I said it," he repeated. "We'll include you whenever we possibly can. Okay?"

"If you mean it exactly that way, it's okay," Barby said. "Now come on. We'll show you the main lodge and you can register, then we'll have a swim."

Rick looked around appreciatively as Barby led the way. Aspen Lodge was just about perfect. If the girls stayed at the lodge, he and Scotty wouldn't need to worry about them. They'd be safe and out of trouble in these cool and lovely surroundings.

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CHAPTER V

Project Ramshorn

Rick and Scotty were not the only new employees. They gathered with several others in the main office of the project building they had seen from the air, while John Gordon and three other men waited for them to find seats and quiet down.

The boys had picked up their badges at the main gate, where they were told to report to Building Ten. It had turned out to be the one surrounded by the chain-link fence, and an Air Force guard had examined their badges with care, comparing the photos with their faces before he let them in. Security, Rick thought, was probably pretty good.

Now a tall, lean man in workman's khaki trousers and open shirt took the floor. "My name is Murphy.

I'm Lomac's Administrative Director for this project, which means you new men come under my jurisdiction. However, you will report to the technical crew for assignments, and to me only for equipment-and your pay."

The new men chuckled. Pay was important; that was one of the reasons why they were here, in the middle of the Nevada Desert, in the

heat of summer.

“We’ll get down to specifics in a moment,” Murphy added. “But first, I want to introduce the Scientific Director for this phase of the project, Dr. John Gordon.”

Gordon sat on the edge of Murphy’s desk and let his glance roam over the new men. “You are all technicians,” he began. “This and any other similar project depends on men like you. The scientists and engineers can come up with beautiful plans, but they’re worth nothing unless the technical folks can carry them out. We think you can work more intelligently if you know how your tasks fit into the overall project, so I want to outline briefly what Project Ramshorn is all about. The general project classification is secret. The actual design of some parts, and the capability of the system, are both top secret.”

The scientist went to a blackboard at the rear of the office. A series of rollers, like wall map rollers, were at the top of the board. Gordon pulled one down like a curtain.

Rick whistled softly. Instead of a chart or a map, Gordon had pulled down an artist’s conception of something like a cross between a rocket and a plane. It was long, with a pointed nose, and perfectly smooth except for tiny control surfaces, like wings that had never developed.

“This is Ramshorn,” Gordon said. “It is a nuclear-powered ramjet, of a radically new design. If it works-and we think it will-it will have virtually unlimited range. That means it can approach aggressor territory from any direction. It can carry ten hydrogen bombs, each one self-propelled and guided, and capable of traveling five hundred miles after launching from Ramshorn. The nuclear ramjet will have a cruising speed of Mach 5.”

Rick swallowed hard. The thing would actually cruise at five times the speed of sound. He calculated quickly. That speed was a little better than a mile a second at sea level.

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“Its normal flight pattern,” Gordon continued, “will be at an altitude of one thousand feet. However, it will be capable of climbing to fifty thousand feet if necessary-although it will be less efficient at that altitude-or it can maintain Mach 5 flight at only five hundred feet. To do this, it will have to have a fully automatic control system, because no human could react fast enough to dodge obstacles. Its eyes will be radar of a special kind, capable of seeing over the horizon. Its brain

will be a microminiaturized computer, which will take the radar information and continuously plot a path that will avoid mountains and smaller obstacles. I leave it to your imagination to decide what such a weapon system can do.”

Rick realized that Ramshorn could be launched anywhere, follow a flight path even to Antarctica before it turned around and headed for the target. And it could follow any path to the target. Flying at such a low altitude, it would be very hard to find by radar, because hills and even buildings would interfere. It would fly so fast that even rocket defenses would have trouble reacting in time. Then, when it reached its assigned area, it could fire hydrogen bombs in a pattern that could cut a swath a thousand miles wide and several hundred miles long. Just one squadron of Ramshorns could blanket a large nation. With such a weapon in the hands of the United States, Rick knew, no nation would dare to start a war. It would be like a man going for his gun with a dozen cocked pistols pointed at his head.

Gordon was continuing. “Here at Indian Springs, we are working on the airframe. The systems to go into the frame are being built at several West Coast plants. They’re about ready for installation. The power plant-the nuclear ramjet itself-is being tested at Jackass Flats. That’s the general picture. Now I want to introduce Ray Harmon, who is in charge of tracking and data acquisition.”

Ray Harmon was a youthful engineer, with sandy hair and a deep tan. Rick liked his looks, and the crisp way he talked.

“Our job,” Harmon began, “is to get information back from this big beast when it begins to fly, which will be in about a week. You men complete the team. We’re divided into two groups, fixed stations and mobile stations. Naturally, with anything this fast, tracking has to be automatic. So we’re using various fixed missile stations capable of fast tracking, and a few specially rigged mobile units. The mobile units are your job. My division has two group chiefs, one for the fixed installations and one for you. Now I’ll turn you over to the mobile unit chief, Captain Bob Aster of the United States Air Force.”

This was the man to whom Rick was to report on behalf of Steve Ames. Captain Aster, tall and thin, looked more like a professor than an Air Force officer. Glasses with plastic rims emphasized the impression, but behind the glasses were a pair of keen, intelligent eyes. Aster’s voice was gentle, but clear and authoritative. “Welcome to all of you. I think we can clear out of this office now and make a tour of the plant. I’ll show you your units and issue handbooks and

you can get to work. In two days we'll start dry runs, tracking a high performance jet from Nellis Air Force Base. Let's go."

The main section of Building Ten was a great open area with workbenches and equipment around its perimeter. But Rick glanced only briefly at the layout. His attention focused immediately on the object in the building's center. Ramshorn!

It was huge. Men scurrying around a vast cylinder of gleaming metal were dwarfed by its size. As Aster led the way closer to it, Rick saw that the tiny control surfaces were really large, bigger than the wings of a medium-range airliner. Even the vertical control surface, or vertical stabilizer, was bigger than the entire wing of his Sky Wagon.

"It'll never get off the ground," Scotty said half-jokingly.

Captain Aster heard the comment. "Doesn't seem so, does it? But the power plant will have enough **Page 21**

zoom to fly a rock that big."

"That's not much more than a streamlined rock," a lanky, bearded technician remarked.

The group chuckled. It was obviously true. Only raw power could move anything that big.

Rick could see that Ramshorn would be a natural target for enemy intelligence. Other nations would want to know all about it, and as soon as possible. The existence of such a project couldn't really be kept secret; it was just too big and exciting. The problem, as always, was to find out how information was leaking. Security would be working on it all the time, and the boys were not supposed to substitute for the project intelligence officers, only to keep alert for signs of anything unusual or suspicious.

Captain Aster led the group to a room that was entered from outside the building. This was their equipment room. The captain consulted his list and asked, "Which of you want to work together in teams of two?" Rick and Scotty raised their hands, as did some of the other men. "All right. Pair off and fall in by pairs. If any of you haven't already picked someone to work with, I'll make assignments." Only four of the men had not already agreed to work in pairs, and the captain simply pointed. "You and you, and you and you. If any of you want to shift around in the next couple of days, let me know. Otherwise, the arrangement stands. We can't change once we start dry

runs.”

There were five teams of two. Aster directed the first three teams to stacks of cases. “These will be yours. We’ll assign you jeeps and trailers.” He directed Rick and Scotty and the remaining pair, which included the lanky man with chin whiskers, to other cases. “These are lighter-weight units. You two teams will be assigned to helicopters, because your stations can’t be reached by land.”

Rick and Scotty examined their cases of equipment. There were four, each one tagged with the notation

“Team Five.” The thick volume of loose-leaf instructions Captain Aster handed them was also marked for Team Five.

“My office is next door,” Aster said. “You have the rest of the day to study your handbooks. Tomorrow we’ll start setting up the equipment and checking it out. The next day we’ll practice loading and unloading, plus more practice in setting up. On the following day we’ll assign stations, and you’ll make dry runs to them and set up. If the schedule holds, we’ll start dry runs with a fighter plane for you to track. Turn your books in to my office before leaving this area. Any questions?”

There were none. The men were already leafing through the instruction books. “All right. I’ll be in my office if you want me.”

Rick waited until Aster had been gone for a few moments, then motioned to Scotty. “Here’s something I don’t get. Let’s see the captain and ask about it.”

Scotty nodded, and the two left the workroom and stepped into the blazing sun. Captain Aster was at his desk in the small office he occupied alone next door. He looked up as the boys walked in.

“Brant and Scott. You’re younger than I thought from Steve’s description. Welcome to Ramshorn.”

“Thank you, sir,” Rick replied. “Any special instructions for us?”

Aster shook his head. “Not at the moment. Just keep your eyes and ears open. I’ve assigned you to a helicopter in case something turns up that requires fast transportation, but so far we’ve no idea where the leaks are coming from. Your pilot, incidentally, will be Jimmy Taylor. He’s one of us.”

“Who are we?” Scotty asked.

“Counterintelligence. We’re working with Security, and with JANIG, but we have our own men spotted around. Most of them are like me, specialists with additional duty.”

“I guess we’d better get back to our handbook,” Rick said. He paused in the doorway. “Incidentally, Captain, have you any idea where I could get cylinders of hydrogen peroxide and nitrogen?”

Aster’s eyebrows went up. “What on earth for?”

“I have a rocket belt. It’s in my plane.”

“You’re kidding!”

“No, sir. I flew it a couple of times before we came out, and if there’s some spare time, I’d like to work on it while I’m here.”

Aster grinned. “I’d like to help you. How about showing it to me at lunchtime? I have a hunch we can beg or borrow some peroxide and nitrogen from my buddies at Scarlet Lake.”

“Be glad to show it to you,” Rick agreed. “Come on, Scotty. We’ve got some studying to do.”

Since the boys were not supposed to do anything with the equipment except operate it, they did not have to go into the detail that would have been needed for repairing and maintaining the equipment. Setup and operation didn’t look too difficult at first glance.

They checked the contents of the cases against the list in the front of the book. One case contained the power supply, a compact gasoline generator. The second held equipment for turning signals from Rams-horn into position information and for retransmitting both position and data from the missile’s instruments to the base station. The third case held the control equipment that would allow the antenna to track the high-velocity missile, and the fourth held the antenna itself, with its control box of complicated gears.

The equipment had been designed for dependability and ease of operation, and Rick knew they had no real problem ahead in learning how to handle it. The laser unit which they had taken to Africa, and which had played a vital role in their previous adventure, *The Veiled*

Raiders, had been much more difficult.

Helping Captain Aster locate the information leaks in the project would be much less simple. Rick wondered if Scotty and he would be of any use at all.

CHAPTER VI

The Belt Gets Muscles

The pink panel truck bearing the distinctive markings of the Jones Boys pulled up outside the Building **Page 23**

Ten fence promptly at eleven that morning. Rick and Scotty, who had left the sun-heated workroom in favor of the shade on the north side of the building, saw it come.

“That color is brighter than desert rock,” Scotty observed. “It hurts my eyes.”

“They’re not trying to conceal their presence,” Rick agreed. He watched as the driver got out of the cab, walked around to the rear of the truck, opened the door, and got in. The driver was dressed in white shirt and white trousers, with a white chefs cap on his head.

In a moment the entire top section of the panel truck’s side swung down, and Rick could see that the interior was outfitted with various restaurant equipment, cards to which prepared snacks were stapled, and plastic boxes made of clear polyethylene in which wrapped sandwiches, pies, and other edibles could be seen.

The driver appeared to be lighting a stove. Rick saw the match flare, then the flame as priming fuel caught. It was probably an alcohol stove. The man adjusted the burner and put on a large coffee percolator, then lit the second burner and put a square metal box on it. Rick thought it was probably a hot-dog steamer.

Rick watched a moment longer as the driver pulled up what was probably a stool or large box and sat at the counter. He reached overhead and produced a fishing rod. From its length and the appearance of the reel, Rick decided it was a spinning rod. The driver laid it on the counter and fished around in something under the counter, finally coming up with what seemed to be a new spool of line. He began to peel off the old line from the reel.

In front of the building’s main entrance, Rick saw Gordon, Murphy, and Harmon engaged in some kind of heated discussion. Aster emerged and joined them.

“Looks like a typical fight between scientists, engineers, and administration,” Scotty said with a chuckle.

Rick agreed. “Let ‘em fight. We’ve got to get this assembly sequence down pat. Turn back a page and let’s go through the unpacking sequence again.”

The boys settled down to studying, and became so engrossed in memorizing the sequence in which the parts were to be taken from the cases and assembled that they didn’t even notice Aster approaching.

“Lunchtime,” he announced. “How about a quick snack and then a look at your rocket belt?”

“Okay.” Rick scrambled to his feet, suddenly conscious that he was hungry. “What do we do with the book during lunch?”

“Leave it in Murphy’s office. There’s always someone there.”

Aster led the way to the main office, and Rick handed the handbook to Murphy’s secretary. “We’ll pick it up after lunch,” he said, thanking her for taking care of it. The three walked through the main gate to where a number of workmen were already gathered around the Jones Boys truck. The driver had restowed his fishing tackle and was dispensing sandwiches, hot dogs, coffee in paper cups, hard-boiled eggs, the pre-packaged snacks of cheese and crackers or sardines and crackers, pieces of pie, and assorted soft drinks.

The three got in line. Rick looked at the driver from close range. He was round of face, and perspiring **Page 24**

freely as he worked. His white clothes were already soggy. Under the wilted chef’s hat, Rick could see that the man was partially bald. His eyes were blue, and somewhat bloodshot, probably from the glare.

Rick bought a corned-beef sandwich and a bottle of Coke. Scotty added a piece of pie to his sandwich and drink. It was commercially made, pre-wrapped pie, and the crust, Rick saw, was rubbery enough to use for a tire patch. “Lots of luck with that pie,” he said.

Captain Aster got a sardine snack and coffee, then led the way to his jeep. “We can munch on the way to the Lomac administration building. Okay?”

“Fine,” Rick said. “Are there many of these Jones Boys?”

“Two. One operates here, and the other at the Nevada Test Site. Bill and Carl Jones. This one’s Carl.

Why?”

“Best possible form of sabotage,” Rick said. “If they sold pie like that to everyone in the project, no one would be left alive except a few human ostriches like my buddy.”

Aster grinned. “I will guarantee that he won’t buy another piece of pie from Mr. Jones after sampling that one.”

Scotty had finished his sandwich. He unwrapped the pie and took a bite. “I’ve had worse,” he said. “At least I think I have, but I can’t remember where and when.”

They finished the brief meal in the shadow of the Sky Wagon, then hauled the belt from the luggage compartment. Aster examined every detail with care. “Very good. Same idea as some of the early experimental belts, but simpler in some respects. Tell me about it.”

Rick did so, briefly and concisely.

Aster thought it over. “One minute flight time, and three hundred pounds thrust maximum, hmm? Doesn’t give you much time in the air.”

“True,” Rick agreed. “But I had two limits. One was the tank size and the other was the kind of fuel I could get.”

Aster nodded. “You did the best you could. But how would you like two minutes of flight time with another two hundred pounds of thrust?”

“I’d like it fine,” Rick said promptly. “Can it be done?”

“Sure. Of course I want something in exchange, like flying the belt a few times.” The captain grinned.

“I’ve wanted to try one ever since I heard about the first design, but I’ve never been in a position to borrow one and haven’t had time to make one.”

“It’s a deal,” Rick said quickly. “What’s to be done?”

Aster pointed to the belt. “We put spherical tanks to hold nitrogen on top of the fuel tanks, then we modify the catalyst beds. Hydrazine

needs a different land of catalyst than peroxide.”

“Hydrazine!” Scotty exclaimed. “That’s what they use to power Titan rockets.”

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“Yes,” Aster agreed, “but they burn it with an oxidizer. We’ll use it as a monopropellant, which is far less powerful.”

“When do we start?” Rick asked.

“We get through work at four-thirty. How about putting in a couple of hours at Scarlet Lake tonight?”

“It’s a deal,” Rick said again. “Starting at four-thirty. Incidentally, are you a rocket expert?”

The captain smiled. “Sort of. I’m a mechanical engineer by training. I helped to design some of the Air Force air-to-air rockets that fighters carry for use against enemy planes.”

They hoisted the belt into the back of Aster’s jeep and drove back to Building Ten. The Jones Boys lunch wagon was still in front of the main gate. “I’m still thirsty,” Rick said. “Anyone want a drink?”

“A Coke,” Scotty said. “You buy.”

“Okay. You help carry the belt into the office.” Rick walked to the panel truck where the sweating proprietor was washing off his counter. “Two Cokes,” he said. On impulse, he added, “Neighbor.”

Two slightly bloodshot eyes locked with his. “Neighbor?”

“We moved into Aspen Lodge last night,” Rick explained. “The middle cabin.”

“Oh.” Jones reached over the counter and offered a hand. Rick took it, sensing the strength under the rather plump exterior. “Welcome, neighbor. I’ll buy the Cokes.”

“Thank you,” Rick replied. “Incidentally, where do you fish around here?”

“Fish?”

“I saw you putting new line on your reel.”

“Oh. Actually, it isn’t around here. It’s up north of here, past Tonopah. A little stream that feeds into Fish Lake has Dolly Varden trout in it. Ever see one?”

Rick hadn’t.

“I think it’s the most beautiful trout there is. My brother and I get up there about once every two weeks, usually on a Sunday. I just brought the rod along to work on it when I get a few minutes. It needs working over.”

“This wagon is a pretty compact setup,” Rick observed. “Do any cooking yourself?”

“Just heating hot dogs and making coffee. I can heat up a hamburger if anyone asks for it. We get prepared stuff in Las Vegas every other day.”

Rick walked around to the rear of the truck and looked in. “Just as compact as a boat,” he said. He saw that an ice chest was under the counter, and a stool behind it. There were cupboards and clips for just about everything, including the fishing rod. “Very nice,” he said. “It’s certainly a convenience for the **Page 26**

people who work here.”

“That’s what makes it profitable,” Jones said. “Well, looks like all hands are fed and watered or Coked .

See you later.”

“Thanks again for the drinks.” Rick carried the Cokes inside the gate, pausing while the guard inspected the badge clipped to his shirt pocket.

He estimated that it would take a half hour to get to Scarlet Lake , the big rocket base to the northwest of Indian Springs. Would their Building Ten badges be good for entry? He’d have to ask Aster. Also, John Gordon had said something about a jeep. They’d have to arrange for the jeep before the end of the day.

If they worked for two hours at Scarlet Lake , that would leave an hour for returning to the lodge plus a little spare time. He could call the Winstons and tell them that Scotty and he would be home at eight.

Rick was grinning as he walked toward Captain Aster’s office. The

Brant luck had held. His boss, and his intelligence contact, had turned out to be a rocket engineer with an interest in the belt. How lucky could he get? Then he sobered, because-although he wasn't superstitious-he did believe in the laws of probability. Good luck and bad luck, when pure luck was involved, tended to even out. He didn't want a misfortune to balance his good luck and spoil the trip I

CHAPTER VII

The Circular File

The days had settled into a routine by the end of the first week. Rick and Scotty reported to Building Ten each morning and made endless dry runs with the equipment. But the run with the jet was postponed, because work on the Ramshorn engine was slightly behind schedule. Each day at noon they lunched from the Jones Boys wagon, where the proprietor continued to work endlessly on his fishing rod.

He had taken the guides off the pole and replaced them with fresh glue and wrapping, disassembled the reel, cleaned it, and was now in the process of reassembling it.

In the same circumstances, Rick would have passed the time reading or designing something, but he guessed the Jones Boy liked to work with his hands. The wagon was there after work, too, when the Building Ten crew stopped for a drink or a light snack. Rick, Scotty, and Aster usually bought something before starting out for Scarlet Lake .

The resourceful captain had discovered an Air Force regulation that permitted official cooperation with student rocketeers, including provision of supplies and facilities. Under Aster's guidance, Rick drew up a formal proposal, which was accepted by the Senior Air Force Officer at Scarlet Lake . This made the rocket belt an officially approved project. It was only necessary for Rick to write a formal report when the experiment ended. Of course it removed the project from his school competition, but he didn't mind that.

Aster's first step was to hunt through the debris of broken rockets and discarded parts in the Scarlet Lake junk pile until he found two stainless-steel spheres in good condition. Such spheres were common in rocketry. Usually they held nitrogen or helium under pressure, far higher pressure than the **Page 27**

rocket belt needed. Aster arranged to have them inspected by radiograph, and then got a specialist to weld the one weak spot the inspectors found.

Rick and Scotty drilled holes in the top of the belt fuel tanks, found valves and fittings, and placed the spheres on top of the tanks. Valves

in the spheres controlled the flow of nitrogen into the fuel tanks, allowed the spheres to be filled, and air to be bled off during the filling.

Aster, meanwhile, found other materials in the scrap pile, and obtained two critical valves by requisition.

By Friday night the new assemblies were in place, and the captain requisitioned hydrazine, nitrogen, and catalyst for use on the following day.

As the boys drove to Aspen Lodge a bit late for dinner, Rick said, "It's better than the original design.

For one thing, the tanks can be filled without spilling fuel. And we can bleed the air from them just by opening the valves and letting a little nitrogen flow."

"But how will it fly?" Scotty demanded.

"Exactly the same. The only difference to the pilot will be that he has to useless throttle to get the amount of thrust he needs."

"Going to try a tethered flight first?"

Rick shook his head. "No need. It won't be any different than flying with peroxide at Spindrift. But you and Captain Aster should try one flight with safety lines first, just to get the feel of the belt"

"And so should the girls," Scotty reminded.

"Uh-uh."

Rick had promised, and that was that. He wished he hadn't. But working at Scarlet Lake each night had been a violation of his promise to Barby and Jan that they would be included in after-work activities, so he had to get their agreement-which had meant promising that they could try the belt as soon as all bugs were out of it.

As they approached the Indian Springs gate, Scotty snapped his fingers. "Hey! We didn't bring that book on amplifier maintenance we wanted to study over the weekend."

Rick looked at his watch. "Let's go get it. We can call the lodge at the same time to say we're on our way and to wait for dinner."

He swung the jeep into the entrance, showed his badge and Scotty's,

and was allowed to continue to Building Ten. The gate was locked, but the guard opened it after examining their passes and noting their business in his log.

The keys to the outside rooms were racked in Murphy's office. The office door was left unlocked, since it was within sight of the gate guards at all times. Rick pushed it open and stepped inside.

A thin, redheaded young man, dressed in the khaki work clothes of a civilian employee, jumped to his feet as Rick entered. He had been kneeling at Murphy's wastebasket, and Rick saw that he had smoothed out crumpled papers from the basket and spread three of them on the edge of the desk.

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"Who are you?" Rick demanded.

The young man swallowed. "I'm the janitor. I was just . . . just separating the classified stuff from the rest." His voice grew stronger as he talked. "The classified stuff has to be put in the incinerator. The rest just goes into trash bags for collection."

"I see." Rick might have been more convinced if the redhead hadn't looked so guilty. He took the workroom key from the board and went back outside. For a moment he debated, while Scotty waited in the jeep, then he walked to the gate and called the guard.

"Is it okay for that redheaded guy to be fooling around in the office?"

The guard nodded. "He's on the list as a janitor, and the photo on his badge agrees with the one in our files. So he's okay."

"Thanks," Rick said. "I just wanted to be sure."

They retrieved the instruction book, which carried no classification, and Rick returned the key to the office. The redhead was now busily sweeping.

Scotty had shifted to the driver's seat. He rolled through the main gate as Rick swung aboard. Rick outlined what he had seen of the redhead's actions, adding, "He was sweeping up when I got back."

"It's amazing what people throw into the circular file," Scotty said, using the jargon for wastebasket.

“There was a time when spies actually used to buy wastepaper and go through it. But the guard said this boy was on legitimate business and his badge checked. So what’s the problem?”

“Just the look on his face. He looked like a kid caught with his hand in the cookie jar.”

“Maybe you startled him,” Scotty suggested.

“Maybe.” But Rick wasn’t satisfied. He would let the matter rest for the moment, but he intended to ask a few questions when work resumed on Monday.

As it turned out, it wasn’t necessary to wait. When they reached Aspen Lodge they found John Gordon with Mrs. Winston and the girls. Winston was missing.

“Parnell is stuck,” Gordon said. “It’s his part of the project that’s holding us up, so the Jackass Flats crew is working all weekend.”

“And it’s the team of Rick and Scotty that’s holding us up right now,” Barby said. “And we’re starved.”

“Ten minutes,” Scotty replied. “Time to clean up and change, and we’ll be with you.”

“Take fifteen,” Jan suggested. “If you dive into the pool, it will cool you off. We have time. Dr. Gordon is taking us all to Death Valley Inn for dinner.”

“Okay. We’re on our way. Dr. Gordon, can you join us while we dress? Something we’d like to talk about.”

The scientist nodded. “All right, Rick. As soon as you’ve had your dip.”

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A quick shower and a quicker dive into the pool made the boys feel like new, and took only fifteen minutes. As they dressed, Rick told Gordon about the redhead.

“I’ve seen him around,” Gordon said. “He’s part of the crew, and it’s true that classified waste is sorted from unclassified. But the secretaries usually do that. Maybe he was instructed to be certain.”

“Could be,” Rick had to agree. “But isn’t it worth a check?”

“Yes, I think it is. Take it up with Aster. He’ll follow through. Now, let’s get going. I’ve brought a sedan, but it will still take us a while to get to Death Valley . We don’t want to be out too late if you’re going to fly the rocket belt tomorrow.”

“Ready,” Scotty announced.

Rick finished stuffing a clean handkerchief into his pocket. “Lead on to where the chow is.”

CHAPTER VIII

The Jones Boys Get Social

The belt flew. It flew better than Rick's expectations. While Captain Aster held the stopwatch and signal pistol, Rick climbed above the assembly shed at Scarlet Lake, circled over the launching pad where a great, winged rocket called Pegasus had once stood—a rocket on which the boys had worked—and returned for a smooth landing with time to spare.

In the audience, even though it was Saturday and a day off, were several men with whom he and Scotty had worked. Gordon, Mrs. Winston, Barby, and Jan were there, too, excited at the prospect of trying the belt themselves. Two of the fueling crew had brought a tank truck of hydrazine and two large containers of nitrogen; they had volunteered because they wanted to see the belt operate.

After the congratulations, Captain Aster told Rick, "I have a hunch we may have enough fuel for a little more than two minutes, and there's only one way to find out. That's to make a bench test."

"When?" Rick asked.

"Right now."

Scotty finished loosening Rick from the harness. "How do we do this?"

"There's a test stand for small rockets behind Building Two. We can lash the belt to the stand, turn it on full power, and hold a stopwatch on it."

There were plenty of hands to help. The two fuel men refueled the belt, while some of Rick's old acquaintances went for steel cable with which to attach the belt to the stand. Rick got out of the hot flight clothes.

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The belt was loaded in Aster's jeep and the group repaired to the rear of Building Two, an assembly shop for small sounding rockets. Behind the building was a concrete pad from which a tall pedestal of reinforced concrete rose. The front of the pedestal was about six feet

wide, and covered with inset bolts, rings, and devices for attaching steel bands. A residue of black particles and signs of scorching showed where other tests had taken place.

One of the Scarlet Lake crew went into Building Two and brought out two heavy U-shaped steel bars, which he attached to the face of the pedestal, using fittings set into the concrete. The belt was mounted upside down, with steel cables running through the corset annholes and others around the tanks. The cables had screw fittings on the ends, and these were pulled up tightly by wrenches.

“Turn it on to full thrust when I call time,” Captain

Aster directed, “then step to one side. Give it plenty of clearance—just in case the belt loosens a little and sprays hot exhaust. You’ll have time before thrust builds to maximum. Everyone else step back.”

When Rick was in position, hand on the thrust control, he looked around to be sure everyone was out of range, then watched Captain Aster. The officer lifted his stopwatch, called “Time,” and pressed the button to start the watch.

Rick opened the control wide and backed quickly out of the way as the fuel was driven into the catalyst bed by the nitrogen in the bottles. With a roar the hydrazine decomposed into nitrogen and hydrogen.

The exhaust nozzles spewed forth hot gases.

It was the first time Rick had actually seen the belt operate and he gulped. He hadn’t realized the hot torches of gas were quite that bright—or that close to the seat of his pants. Fortunately, the nozzles directed the exhaust away; otherwise, his legs would have been burned.

Two minutes seemed like an eternity while waiting for the fuel to run out. The belt stopped abruptly, and Aster clicked the watch, a big grin on his face. “Two minutes and twenty seconds I”

“Great!” Scotty called.

Rick agreed.

Barby and Jan rushed forward. “When do we get to try it?” Barby asked.

Aster beckoned to Rick, and the boy joined the officer without

replying. Aster lowered his voice. "Are you fussy about others trying it in captive flight?"

"Not especially," Rick replied. "Why?"

"You have a lot of helpers. We have more fuel than we can burn in a week, and I've had everything rigged in Building Two. It will be perfectly safe."

Rick looked at his watch. "It's only nine o'clock. Plenty of time for everyone who has helped, to give the belt a try on the tethers. And we'll still have time for a few free flights after lunch."

"Good. Let's get at it."

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The volunteer helpers were already releasing the belt from the test stand, and the two fueling men were standing by to refill with nitrogen and hydrazine. They were in protective clothing, because hydrazine is every bit as corrosive as peroxide. Rick walked over to them. "Would you two like to try the belt with safety lines hooked on?"

"You bet," one said quickly, and his mate echoed, "Just try me!"

"You've earned it," Rick told them. "If you'll keep refueling, we can let everyone who has helped try it out."

"We'll stick," the first crewman assured him. His mate nodded.

Inside Building Two, a great shed three stories high, preparations already had been made. A winch ran on a track overhead, nearly sixty feet above the floor. Its cable and safety hook dangled in the center of the floor, within easy reach. Laid out on the floor were two thin, nylon-covered cables with safety snaps.

As soon as refueling was finished, Rick and Scotty helped Captain Aster into the harness. The thin lines were snapped to the sides of his linesman's belt, and the cable from the overhead winch into the ring between the two fuel tanks. The new nitrogen spheres were far enough apart so that they did not interfere.

Rick and Scotty went through the check list, then Rick asked, "Are you sure the winchman knows what to do?"

"I'm sure," Aster assured him. "It's a high-speed winch, and he handles it like an expert handles a fishing rod."

Rick looked up to where the winch operator was seated in a sort of balcony over the side of the building. "Ready?"

The winchman held up thumb and forefinger closed in a circle, the near-universal signal for "okay."

"You're on your own, Captain," Rick said. He and Scotty picked up the two safety lines and moved back. One of the volunteers, an Air Force major, held the stopwatch.

Aster's flight was a bit wobbly until he got the hang of controlling himself by balance, then everything went perfectly. When he finally landed without a bump, he was grinning from ear to ear.

Rick and Scotty helped him remove the belt, and the two refuelers carried it outside for reloading. Aster just said, "Marvelous experience. Really marvelous." He repeated it three times. Rick knew exactly how he felt.

"You next?" Rick asked Scotty.

The dark-haired boy shook his head. "I agreed to yield my place in line to Barby. There's plenty of time."

"And Barby yielded to me," Jan said. "I'm next."

Both girls had worn jodhpurs, and someone had supplied them with coveralls to put on over their **Page 32**

clothes. Even in the shapeless work garment, Jan was slim as a willow.

"Sure you can hold one hundred and thirty pounds on your back, Jan?" Rick asked.

The two spheres had added pounds, and Rick knew from experience that the rig was heavy, even for him.

"I can try," Jan said firmly.

The fuel crew came back with the belt, and Rick and Scotty buckled Jan into it. "Brace yourself," Rick warned, and they slowly let her take the full weight. Jan balanced herself firmly, and with natural grace her body shifted to adjust to the heavy load.

Rick and Scotty went through the check list, while Aster made sure the winchman was ready and the stopwatch reset to zero.

“You know what to do,” Rick told Jan. “You’ll find yourself balancing naturally. Don’t worry.”

Jan patted the crash helmet, then took a firm grip on the controls. “I’ll be fine, Rick.”

“Okay.” He stepped back and took the safety line. “You’re on your own.”

Jan’s flight was even smoother than Aster’s, probably because of her natural sense of balance. Even so, it looked incongruous to Rick to see the slim, feminine figure attached to the maze of tanks and plumbing.

Somehow, girls and the Plumber’s Nightmare didn’t go together.

Barby tried the belt next, and the two girls were equally ecstatic over the sensation of flying. Then Scotty made his flight, and one after another of the several helpers flew the belt. The winchman was last. He picked his own substitute, one of the Building Two crew, and made a perfect flight.

John Gordon and Mrs. Winston had gone to the communications room to talk with Parnell Winston at Jackass Flats. They returned in time for the scientist to try the belt before the group broke up for lunch.

Mrs. Winston was disappointed at not seeing the girls fly, but Rick said, “If there’s time, they can make a free flight this afternoon. Are you sure you don’t want to try the belt?”

“It’s fun watching, but I don’t really have a strong desire to try it. I’d only be using up the time of someone who’s really anxious-like these two adventurous young charges of mine. But if you let them try a free flight this afternoon, Rick, we’ll all celebrate at Las Vegas. Parnell said he could join us for dinner tonight, because everything is set for a test in the morning.”

Eager blue eyes and brown eyes met Rick’s. “Can we?” Jan and Barby asked in unison.

Rick looked at Aster, then at Gordon and Scotty.

Aster spoke for all of them. “They handled the belt as well as any of the men, and better than I did. It’s really quite simple to handle, if you

don't lose your head and balance, and I'd say these two have nerve enough."

Gordon and Scotty nodded, and Rick said, "Okay. We all agree. Let's have lunch and get started."

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It was a successful afternoon, with Aster, Scotty, the girls, and John Gordon making free flights. Rick topped it off by making a flight himself, soaring like Superman over Building Two and back again, then making a circle only two feet above the ground and dropping featherlight to a landing.

Parnell Winston joined the Spindrift group at the lodge as they were enjoying a quick swim before dressing for dinner. He reported that all was in readiness for a test run of the nuclear ramjet in the morning. It should iron out the last of the problems that had arisen, and then mating of engine and vehicle could start Monday morning.

Rick, Scotty, and the two scientists were dressed long before the girls were ready. As usual, there was last-minute ironing, hair spraying, and all the rest of the girl-type preparations that hold up the wheels of progress.

The four male Spindrifters sat on the porch of Winston's cottage and chatted. Up the street, an engine roared into life, and Rick looked over in time to see one of the Jones Boys panel trucks pull away, leaving the other parked next to the Jones cottage. He had a brief glimpse of Carl Jones in white shirt and bow tie as the panel truck left.

"Looks as if the Jones Boys are out on the town, too," he observed.

"We have one of them handy at Jackass Flats all day," Winston said. "It's a real convenience. I wondered about a private outfit like that in the test site, but it's okay. Jones was issued a badge and vehicle pass that lets him go on the roads, but not into any of the secure areas. He waits at a crossroads just outside the secure area, and gets quite a rush at lunch and coffee-break time. In between, he just sits and waits. Usually working on his fishing rod."

That startled Rick. "Fishing rod? So does his brother at Building Ten. They must be a pair of fishing nuts."

"Whose rods break down at the same time," Scotty added dryly.

The four looked at each other. Winston broke the sudden silence. "Coincidence. There's certainly nothing strange about a passion for fishing. I've seen our man step out of his truck and try a few casts across the desert, so it's a real rod and reel."

"Ours has a real reel, too," Rick said with a grin. "I saw him putting new line on it."

John Gordon chuckled. "I might point out to our two professional detectives that neither Jones gets into the classified areas, so it's unlikely the panel trucks are spy wagons."

The conversation came to an end as the female portion of the Spindrift group emerged. Looking at Jan and Barby, Rick thought the wait had been worthwhile, but of course he couldn't admit it. Mrs. Winston looked scarcely older than the girls.

"We're ready," Barby said brightly.

"In the words of a one-time king," Rick replied, " *'At long last.'* Let's go before Las Vegas closes down for the night."

The drive, in Winston's sedan, was pleasant in the cool of the evening. The scientist took them to the famous Strip, a neon wilderness of plush hotels and gambling salons, and drove into the parking place of

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a hotel that advertised a famous comedian as its stellar attraction. When Rick saw the rows of cars in the dim-lighted parking lot, he wondered if there would be a table available. There were five hundred cars at least.

As they entered, he saw that the gambling salon was the main attraction; evidently most of the people got no farther than the blackjack, roulette, and dice tables, or the gleaming rows of slot machines.

"I feel lucky after that flight today," Jan said. "I wish I could make just a small bet. I'd win."

"That's what every one of these people thinks," Rick told her. "And most of them are losing."

"I'd win," Jan insisted. "I'm lucky."

Winston had reserved a table, apparently by phone from the test site.

The party followed a bowing headwaiter to an excellent location on a terrace overlooking the stage.

A waiter handed out menus the size of a newspaper page, but Rick, who had been to Las Vegas before, made his choice quickly, then looked around the extravagantly decorated room. People were coming in from the gambling salon to have dinner before the show. Rick watched them, trying to size them up by type. Many were obviously West Coast vacationers with deep tans, in from Los Angeles for the weekend. Some were typical tourists. There was a sprinkling of men who might have been in rackets of some kind. Most of the men were in ordinary business suits, but a few wore black tie.

Rick's eyes caught a pair at the doorway and he leaned forward. "Look who's suddenly appeared.

Neighbors!"

The Spindrift group turned in time to see the Jones Boys scan the room quickly, then depart .

"The social Joneses suddenly become unsociable," Scotty observed. "Was it because they saw us?"

Rick shook his head. "Didn't seem that way. It was more as though they were looking for someone and didn't see him. Or her. Or maybe them."

A few minutes later he knew-or thought he did-for whom the Jones Boys had been looking. Standing in the doorway, neatly dressed in a dark-brown suit, was a young man he had last seen in khaki work clothes bent over a wastebasket. The redheaded janitor from Building Ten!

Rick said nothing, because the waiter arrived to take their orders just then. As the waiter finished taking notes and moved away, Rick caught Scotty's eye and rose. "Will you excuse us for a moment?"

Barby looked at her brother suspiciously, but she didn't say anything.

Rick and Scotty moved through the doorway into the salon and paused while Rick looked rapidly around. "The redheaded janitor looked in, too," he explained. "Be interesting if he and the Jones Boys got together, wouldn't it?"

"Very," Scotty said. "Do you see them?"

“Not yet.” They walked through the salon, alert for a familiar face, then into the hotel lobby, and into the coffee shop. “They must have gone out,” Rick concluded.

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“Maybe they’re still around. Let’s go see.” Scotty headed for the nearest door. It opened on the glittering front of the hotel, and there was no sign of the Joneses or the janitor.

“Let’s try the parking-lot door,” Rick suggested.

Outside, the rows of cars were shining in the moonlight and the pale neon glow from the front. A few people were walking toward the entrance, but there was no sign of the missing men. Rick walked slowly along the front line of cars, Scotty beside him. Unless the trio had ducked into a room in the cottage-style hotel, they had to be nearby. There hadn’t been time for them to get very far.

“Once around the parking lot,” Scotty suggested.

“Okay.”

It was at the dark back of the lot that they heard the sound, like a groan. Both boys stopped and waited.

It came again. Rick dropped to the blacktop and peered under the cars. He thought he saw a huddled shape a few rows in.

“This way.” He made his way between the cars to the spot, then stopped as the groan came again. “One more row, I guess.” He stepped carefully between two sports cars while Scotty ran around through a clearer space.

A man was huddled on the ground. Scotty turned him over. The redhead’s face was dimly visible, eyes closed. He was unconscious. The groan was the rasping of his breath.

“Get help,” Rick said. I’ll stay with him.” Scotty ran.

The redhead was almost under the front of a big sedan. Rick checked quickly. It was unlocked. He reached in and pulled the headlight switch, bathing the area with bright light. Working quickly, he checked the man over. There was a soft spot over one ear. Rick’s lips were pressed tightly together in concern. A bad lump. There was no other sign of injury, but that was enough.

Rick reached into the redhead's breast pocket and found a wallet. He pulled it out and leafed through it rapidly. The middle section consisted of plastic pockets for credit cards, and from one of them the redhead's picture looked at him. Rick whistled.

Under the picture was the name Robert M. Davis, 1stLt., USAF, CIC.

The redhead was an officer in Air Force Counter-intelligence.

CHAPTER IX

Ramshorn Gets a Bug

Rick swished his legs in the swimming pool and stared unseeing at the thick grove of pines that marched up the mountainside beyond the Aspen Lodge clearing. He was concentrating so completely that he failed **Page 36**

to see Jan do a flawless jackknife off the board and was not even aware of her presence until she lifted herself out of the water to a seat next to him.

“Am I improving?” she asked.

“I’m afraid I didn’t see,” Rick admitted.

Jan studied his face, her dark eyes serious. “Thinking about that man you found in the parking lot last night?”

“Partly. And partly about some other things.”

The redhead had been carried off to the hospital, while the Las Vegas sheriff asked Rick and Scotty endless questions. Finally, satisfied that they had not clubbed the officer, he let them go. Rick had located Captain Aster at the Scarlet Lake Officers’ Club and reported what had happened. Aster had thanked him, and told him to go enjoy himself; the military would take over immediately.

Aster had joined the Spindrift group just as the hotel floor show was ending. He reported briefly. The redhead had been knocked out with professional skill, probably with a blackjack. He was suffering from a severe concussion, and the doctors couldn’t say when he might be conscious. The Jones Boys were gambling at the Golden Nugget. There was no basis for suspecting, or questioning them. The coincidence of their presence at the hotel was interesting, but not evidence.

“You’re wondering about the Joneses,” Jan said with sure intuition.

“Uh-uh. They’re probably over at their cottage getting ready for tomorrow’s business. There’s no sign of anything irregular, but I’m still puzzled. The most unusual thing in the desert is a fishing rod, unless you’re closer to Lake Mead than we are. But both of them spend

time working on the rods when not serving customers.”

Rick stared into the pool, where Scotty and Barby were playing water catch with a brilliant orange ball.

The fishing rods stuck a discordant note, and somewhere in the back of his mind was a fact he couldn’t recall, something that tied in.

“Do spies generally use fishing rods?” Jan asked with a little chuckle.

“Not usually,” Rick admitted.

A horn blew from the entrance to the lodge, and they turned as Captain Aster and another officer drove down the row of cabins. Rick jumped to his feet. “Aster. Maybe he has some news.”

Scotty came out of the water and joined Rick as he hurried to meet the jeep. “Wonder what brings Aster here on a quiet Sunday.”

Aster and the stranger parked the jeep and got out as the boys walked toward them. Rick saw that the stranger was an Air Force lieutenant with pilot’s wings. He was young, with close-cropped brown hair, and about Scotty’s size.

“Morning,” Aster greeted them. “Come and meet Jimmy Taylor, the hottest egg-beater jockey in the Air Force.”

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Taylor had a nice grin and a firm handshake. “I understand I’m your chauffeur for this test.”

Rick looked at Aster. The captain nodded. “Jimmy is your pilot. Tomorrow he’ll start toting you on dry runs.”

“Anything new from the hospital?” Scotty asked.

“Our boy’s holding his own, I guess, but he’s still unconscious. I’d like a few minutes of conversation with him, though. Wish he’d come to, if only for a while. Then he could recover peacefully while we get on with the job.”

Rick nodded his understanding. “If he hadn’t been on to something, he wouldn’t have been slugged.”

“Right. And whoever slugged him intended it to be permanent. At least that’s my guess.” Aster shrugged.

“Sooner or later we’ll get whoever did it. But this is Sunday, and nothing’s happening that concerns me. I thought I’d bring Jimmy over to meet you, he reported in for duty last night-and see if we could cook up a little excitement.”

“Like what?” Scotty asked.

Aster smiled. “Like having a swim with you, then taking you for a hamburger lunch, and finally ending up at Scarlet Lake .”

“And if we happen to make a few flights with the belt, you won’t mind?” Rick asked innocently.

“I won’t mind,” Aster agreed.

“We have to take the girls,” Scotty reminded Rick. “We promised.”

Jimmy Taylor had been looking toward the pool, where Jan and Barby were waiting with obvious interest. “That,” he announced, “will not be a hardship. These ancient orbs have seldom seen such a pulchritudinous pair.”

“Does he always talk like that?” Rick asked with a grin.

“Only when in a state of shock,” Aster replied. “Come on. Let’s expose him to Barby and Jan at close range. I want to see if he faints dead away.”

“I’m almost within swooning distance now,” Jimmy returned.

“Come and meet them, then you can use our cabin to change. Did you bring trunks?” Rick asked.

The officers had come equipped. Rick led them to the pool and introduced the helicopter pilot. Jimmy bowed with the grace of a courtier and asked, “Is it all right if I adopt both of you? If it is, I’ll phone my wife right away and she can have our lawyer draw up the adoption papers.”

“Make him show you proof that he has a rocket belt, first,” Scotty advised. “You wouldn’t want a foster father who didn’t own a rocket belt.”

“I don’t have one,” Jimmy admitted. “But I’ll tell you what. You can adopt me, instead.”

“We’ll consider it,” Jan replied. “Bring us some character references from your commanding officer.”

“And your wife,” Barby added.

“Where is your wife, by the way?” Jan asked.

“At Travis Air Force Base. She’ll be joining me in a week or two. Then you can ask her personally about my character. Meanwhile, I’ll wash away my many sins in your swimming pool. Okay?”

“Okay,” the girls chorused.

As the two officers hurried to the cabin to change into trunks, escorted by Scotty, Barby said, “He’s nice. Who is he?”

Rick explained that Jimmy would carry Team Five—namely Brant and Scott—to their assigned tracking station.

“Do you suppose he could give us a ride in the helicopter?” Jan asked.

Rick shook his head. “I doubt it. There are rules about carrying passengers in military aircraft. Scotty and I are legitimate, because we’re working on an Air Force project, but I don’t think he could carry you two.”

Jimmy confirmed Rick’s statement over lunch at the Scarlet Lake Officers’ Club. He was desolate, heartbroken, grief-stricken, and so on, but much as he desired nothing more than to take lovely young girls on rides, the unimaginative generals of the Air Force had issued rules by which he must abide or be shot out of hand by a firing squad kept handy at every Air Force base for just such purposes.

The girls were amused by the pilot’s nonsense. He kept them laughing throughout the afternoon while Rick, Scotty, and Aster made most of the nights in the rocket belt. The girls made one apiece, and Jimmy Taylor declined to try it.

Wingless flight, Jimmy explained soberly, was against the laws of nature. . . . Did they know of any wingless birds capable of flight? . . . No. . . . That proved it. The belt was only an illusion. It seemed to fly, but obviously didn’t, because it had no wings.

A casual observer would have concluded that either the pilot was afraid to try the belt, or not interested.

Rick, however, had learned not to make snap judgments, so he just waited. He could see that Taylor was keenly interested in spite of his flow of comment.

While Aster and Scotty were refueling the belt and the girls were getting out of the coveralls after their flights, the pilot said seriously, "It's a terrific gadget. Do you suppose I could try a tethered flight after work tomorrow?"

"Sure. We'll come over right after work."

Jimmy nodded. "Great. I'd love to try it right now, but I can see the whole operation depends on body balance. I'm pretty sure I'd have no trouble, but anyone who takes a chance when there's a certain way of finding out doesn't last long as a pilot. I learned that the hard way when flying fighters. So I'll wait until I can try it out with a safety line."

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Rick was glad that the pilot was a sane and sensible type under his humorous exterior. Jockeying a helicopter onto a mountain peak in this country was no cinch, and a pilot who took his job seriously was much to be preferred to the hot pilot type willing to take a risk for the fun of it.

The two officers took the Spindrift young people back to the lodge in time for dinner, but declined an invitation to join them. By the time they had taken a quick dip in the pool, Winston and Gordon had arrived.

Rick and Scotty walked to the Winstons' cabin as the scientists got out of Winston's sedan, talking seriously together.

"One Jones is still working away in his little portable restaurant," Scotty noted. "But on the equipment, not a fishing rod."

"Glad to know they keep the wagons clean," Rick said absently. "Did you notice Winston and Gordon?"

They seemed pretty serious."

When the boys walked into the cabin, the scientists were seated at the round table, while Mrs. Winston poured cold drinks. Gordon looked up as the boys entered.

"I went over to Jackass Flats this morning to watch the run with Parnell. I wish now I hadn't."

"Why?" Rick demanded.

Winston shrugged wearily. "So he wouldn't have had to watch a failure. I'm afraid you two will have to wait a while longer before tracking Ramshorn, unless we can get a new bug ironed out within a day or so."

"What was it?" Scotty asked.

"It's a little complicated to explain, but we didn't develop enough power. There was combustion instability that we can't figure out. I have an idea, or the start of one, thanks to some observations John made on the way home."

"It has to be the Rankine cycle operation," Gordon said. "You can clear that up in pretty short order.

I'm reasonably sure, because you eliminated just about everything else at the test site, and in your analysis on the way home. You know the fuel injection is smooth. You know the compressor runs like a greased pig, because you made a strobe check. So that leaves the reactor and the heat exchanger."

"And reactors don't fluctuate, at least at that speed," Winston finished. "You're probably right, John.

We'll start at the heat-exchange cycle in the morning."

Rick had understood only a part of the conversation. His immediate concern was with his own operation. "Any idea when mating the power plant to the vehicle can start, if you find the bug?"

"No firm idea," Winston answered. "Depends on the seriousness of the problem. If it's a simple one, another test run will be enough. If it's serious, we may need several runs and even some redesigning. I'd say we couldn't start for three or four days at the earliest, even if we get straightened out tomorrow."

"How does combustion instability act?" Rick asked.

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"It results in power fluctuation. Instead of getting constant thrust, we

get a random variation. If it wasn't random, we could spot it pretty easily, but since we can't tell when it's coming or what the intensity will be, it's hard to track down."

Gordon added, "It's something like an occasional skip in a car motor. A regular skip is a cinch to identify. But when it only happens now and then, you have the devil's own time figuring out what causes it."

To Rick, it added up to trouble. A faulty power plant, an information leak, and an attack on a counterintelligence corps officer "by persons unknown." Ramshorn was having real problems.

CHAPTER X

ComplaintFrom JANIG

A part of the endless dry runs Rick and Scotty had gone through included loading and unloading their gear into and out of a wooden mock-up of a helicopter cargo door and chamber, so when Jimmy Taylor made a dusty landing on the runway just outside the Building Ten fence on Monday morning, the boys were prepared.

The first step was to go over the area map with the helicopter pilot. Rick's estimate of Jimmy as a careful flier was reaffirmed when the lieutenant showed them in detail what would be involved in reaching the peak from which they were to operate. Their station was just below the top of Wheelbarrow Peak in the center of the Las Vegas Bombing and Gunnery Range . The peak was about 8,800 feet above sea level, and their location was on a slope about a thousand feet below the top.

Jimmy Taylor described the topography and how it affected the air currents, then went into a detailed description of the effect of various wind headings and velocities, and what they would mean to helicopter operations. Rick was not too familiar with helicopters, and the explanations told him clearly that flying one of the ungainly birds was a lot more complicated than it seemed, especially when trying to land under certain wind conditions without room to maneuver. Like most people, he had taken helicopter operations for granted.

Finally, Jimmy was satisfied that they understood what it was all about. "Okay," he said. "We will now pay a visit to the great metal bird where I will further your education by elucidating certain verities concerning communications."

"This means you're taking us to the chopper to give us the word about communications," Scotty translated.

"Verily, verily," Rick said.

Jimmy looked pained. "Sometime I must give you my ten-cent lecture on the English language as a subtle, flexible, and colorful instrument of communication. I will indeed give you the word, Scotty. In fact, I will give you the ungarbled and pellucid word. Roger?"

“Roger dodger,” Scotty replied with a grin.

Jimmy’s lecture began, “I confess that this marvel of aerodynamic science and modern technology is also a producer of noise. Sometimes, when I go on leave, I visit a boiler factory in full operation, just to enjoy the relative peace and quiet. But you will observe this for yourselves when I start the engine and the fans atop the beast begin churning.”

“First, however,” he continued, “let us examine the ingenious devices invented to circumvent the noise of this mechanical marvel.”

The devices were helmets, heavily padded earphones, and throat microphones. The pilot showed them the various switches to be thrown for talking to him, to the base, and to each other. Then he showed them the operation of various safety devices, and ended with a brief lecture on how to survive a crash in a helicopter.

Jimmy ended with an invitation to strap themselves in. He checked to be sure they had performed properly, saw their helmets, earphones, and throat mikes in place, then climbed upward into the “front office.” In a moment the engine started and the great blades of the rotor began to whirl.

Rick lifted his earphones. Jimmy hadn’t exaggerated. The helicopter was so noisy he couldn’t hear himself shout. He knew, because he tried.

The hiss of an active circuit sounded in his earphones and Jimmy came on. “Note that we have no door.

This means you shouldn’t try to open it. Stay in your seats. We will take off and fly to station. If I succeed in landing, I will tell you when you can get out. Roger?”

Both Rick and Scotty acknowledged.

Rick watched out the door as the spinning rotor blades stirred up a dust storm. The helicopter shuddered like a wet dog in winter, then lifted into the air. The dust storm followed briefly, then fell behind. Building Ten appeared below as the copter banked, straightened out, and continued its rising flight.

For a while the ground continued to fall away below. They passed

over endless wastes of rock, sand, and thin patches of Joshua trees, yucca, and grease-wood. Now and then a dirt track wound through the wasteland, and once Rick saw the buildings of Mercury, base for the Nevada Test Site, but the helicopter banked onto a new course and only desert and mountain were visible once more.

The ground began to get closer, and at first Rick thought they were losing altitude. Then he realized Jimmy was on the slope of the mountain, still climbing as the terrain climbed below. The pilot reached the peak and flew entirely around it, finally coming to a hover above a broad, flat shelf. Slowly, like a man reaching for something fragile, he let the helicopter down, and Rick sensed that he was holding position against the wind. In a few moments a dust cloud rose from below and the chopper settled into it, then bumped gently. They were down.

Jimmy cut the engine and spoke into the intercom. "Keep your seats until the dust settles. Then we can get out and look the place over."

The boys waited patiently until he finally gave the word. "Unbuckle and climb out. It's a good idea to disconnect earphones and throat mikes to keep from jerking the cords out by the roots. Once jerked, they won't grow back, no matter how much you water them."

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Rick grinned. Apparently Jimmy was incapable of saying things simply, unless he was very serious.

The three climbed out to face a vista of complete barrenness. Not a shrub broke the endless expanses of rock. Beyond the shelf, facing out, Nevada stretched to the horizon. Somewhere within sight, Rick knew, there must be trees and green, growing things, but they were not visible in the distorted heat waves rising from the desert. Turning around, he saw the peak rising a thousand feet into the cloudless sky.

Jimmy broke the silence. "See any cool, shady spots where you'd like to set up?"

Among the many desirable things not available on the mountain, shade was high on the list.

"We ought to bring a tent," Scotty observed. "Or at least a tarpaulin and a couple of poles. Well fry in this sun."

"Too true," Rick agreed. "I'm glad we didn't bring the equipment this

time. We won't have to stay too long."

Jimmy Taylor had an idea. "I happen to know a parachute rigger at Nellis Air Force Base. If I could promise him a try at that rocket belt, it might just be possible to persuade him to part with some parachute cloth. By using the rotor blades and a bit of cord, we could make a lovely canopy to shield us from old Sol. What say?"

"Promise away," Rick agreed. "A trip on the belt is a small thing in exchange for shade up here."

They made a rapid inspection of the area, decided that Jimmy had selected the best spot for landing and setting up the equipment, then buckled in once more and took off for home.

As the helicopter came in for a landing Rick saw the Jones Boys truck, already serving the early eaters.

He wondered if Jones had passed the waiting time by working on his fishing rod.

As Jimmy took off again to refuel his bird, Rick and Scotty headed for Aster's office to report. The office was empty, the phone ringing.

Rick picked it up. "Captain Aster's office."

"Is this Aster?" It was a man's voice.

"No. He's not here at the moment."

A pause. "Who is speaking, please?"

"Rick Brant. I'm one of Captain Aster's crew."

"Just a moment."

Rick waited. Presently a new voice came on the line, one that he recognized.

"Rick?"

"Hello, Steve."

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Scotty looked up quickly, and Rick nodded an answer to his pal's unspoken question. The caller was Steve Ames of JANIG.

“Rick, where’s Aster?”

“I don’t know. We just got in from a flight and the phone was ringing, so I answered.”

“All right. Find him and relay this. We have intercepted a transmission with a full report on the Jackass Flats run of yesterday. And I mean a full report, including details of combustion instability, possible trouble with the Rankine cycle operation, and estimates of how long it may be before the trouble is ironed out.”

Rick gasped. “A transmission?”

“Yes. Aster will fill you in. We’ve known about the transmitter and who is operating it for a long time, but haven’t closed in because it wouldn’t help us locate the source within the project. Obviously, it’s someone close to the project. Tell Aster.”

“Okay, Steve.” Rick hesitated. “Should we talk this way on an open line?”

“It isn’t open,” Steve replied. “It’s a secure line. What’s on your mind, Rick?”

“Just that Ramshorn wasn’t operating yesterday. The operation was all at Jackass Flats. So the leak must be there.”

“Reasonable, but not necessarily accurate. The leak must have come from someone on the power end, but that doesn’t mean it came out of Jackass Flats. Aster will track down the movements of everyone who knew about the test. It will take time, and it may produce nothing. But it’s the only way to proceed.

So long.”

Rick told Scotty about the conversation quickly, and the boys hurried to find Aster. It wasn’t difficult; the captain was in the front office talking to Murphy. At Rick’s signal, he broke off the conversation and joined them. Together, the three walked back to the captain’s office, where Rick reported the conversation fully and accurately.

“Pretty fast,” Aster observed. “Almost an instantaneous leak. Someone must have rushed to hand out the dope to the transmitter operator.”

“So you know about the operator?” Rick asked.

“Yes. We’ve known for some time. He uses a high-speed compression technique. Records the message on tape, then plays the tape in one short burst by transmitting it at about a thousand times normal speed.

At the other end, they record it and play it back at slow speed. Simple but effective. It’s usually hard to track down a transmitter that operates in such a fashion, but we were lucky. The operator is a blackjack dealer in Las Vegas. The actual transmitter is in a house trailer at the edge of a trailer park on the outskirts of the Strip.”

“Any idea how the dealer gets the information?” Scotty asked.

“How, Yes. From whom, No. Ever watch blackjack?”

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Both boys had.

“When someone wins and they want to tip the dealer, how do they do it?”

“By dropping a chip into his shirt pocket,” Rick replied.

“Yes. That’s so the casino guards won’t think the dealer is holding out on the house. Well, a chip can be hollowed out to contain a message, and we think that’s how the dealer gets the word. But from which player and when? We’ve had the dealer watched since we discovered him. He’s collected tips from maybe five hundred people. He has about fifty regulars who come and go.”

“Including the Jones Boys?” Rick demanded.

“Not so far. But that means nothing. They could use runners and never put in an appearance themselves-if they have anything to do with it, which is pure speculation on your part up to now.”

“True,” Rick agreed, but he wasn’t convinced that the speculation was unwarranted. The Jones Boys might be innocent as woolly little lambs, but he just didn’t feel right about them. Something had struck a wrong note, but try as he would, he couldn’t put his finger on it.

CHAPTER XI

Instructions for the Girls

Captain Aster moved fast. He called number after number and issued instructions, and by lunchtime Project Ramshorn was under a security blanket so tight that even one of the tiny desert pocket mice would have had trouble getting in.

All personnel with less than top-secret clearances were assigned to jobs far from the project buildings at both Indian Springs and Jackass Flats. Among them were the Jones Boys, who were told to remove their vehicles to the main gates.

Rick had just finished purchasing two sandwiches and a container of milk when the Jones at Building Ten got the word. The man looked at the guard and shrugged. "I might as well go home. No one will walk to the main gate to buy, and those who want to go that far will eat at the restaurant. How long does this last?"

"Sorry. I don't know. My instructions were only to tell you not to come inside the main gate."

"Okay. Orders are orders. I just hope it doesn't last long, or I'll go out of business."

Rick watched the man's face carefully during the brief exchange, but Jones seemed no more than ordinarily upset. Anyone who lost his principal sales stand would be disturbed.

Scotty made a quick purchase, and Jones finished serving those who were waiting in line, then closed up **Page 45**

and drove off. The boys took their purchases back to the Building Ten compound to have lunch in the building's shadow.

John Gordon joined them. "I was too late to buy the Jones businessman's lunch. How about bringing your sandwiches over to the restaurant? I'll buy you a sundae for dessert."

The restaurant was outside the Indian Springs base, connected with a gas station, bar, and pint-sized gambling casino with slot machines of various kinds.

The boys agreed, and Scotty asked, "Suppose Aster can come with us?"

"I doubt it. He's running around like a sheared sheep. We'd better go without him."

They got into Gordon's jeep and drove around the perimeter of the airfield to the main gate, through it, and onto the parking lot near the restaurant. There was no sign of the Jones truck. Rick guessed he had meant it about going home.

A waitress led them to a table in the corner and looked askance at the lunch the boys carried. "Don't you trust our food?" she demanded.

"They're on special diets," Gordon explained.

"Good food gives them the collywobbles. I'll have two cheeseburgers, and coffee. We'll all finish up with a sundae."

As soon as they were alone, Scotty started questioning the scientist. "What does Aster hope to gain by blocking off the project?"

"By getting rid of everyone who hasn't a top-secret clearance, he's hoping to stop the leaks. This is a critical moment. Winston went to Jackass Flats with a pretty good idea of what went wrong, and they're checking it out. We don't want anyone to know whether he's right or wrong."

"But everyone knew about the combustion instability," Rick objected. "At least I got that impression."

Gordon shook his head. "Wrong. Only the professional staff knew it, and no one knew right away what might have caused it. We shut down yesterday, and packed up and went home. Winston did his thinking aloud while we drove, using me to bounce his ideas back at him. By the time he went to the Flats this morning, he had his ideas in line, and briefed the staff. That's why Aster is so upset. The leak must have been almost instantaneous."

"There must be only a limited number of people who had access to the information," Scotty observed.

"They could all be checked out."

"That's being done," Gordon told him. "At first look, no one on the professional staff left the Flats this morning, and no one used the

phone except the Operations Director and Safety Officer, both old hands who are fully cleared. The question now is, who did have access to the staff? It has to be someone who left Jackass Flats early. Only a phone call could have gotten the information out fast enough.”

“Where’s the nearest phone outside of the project?” Rick inquired.

“At Mercury. There are public phones there.”

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“Not much help,” Rick observed. “There’s a big work force around the project that doesn’t have anything to do with the project itself. The phones must be in use often.”

Gordon agreed. “But Aster is an able officer. He’s not only a first-rate engineer, but a capable intelligence officer. He’ll track it down.”

The waitress arrived with Gordon’s food and coffee, took their orders for sundaes, and departed. A group of men moved into the next table, and conversation on sensitive subjects was no longer safe. The trio chatted of other things, finished their lunch, and left.

Aster was in his office when the boys arrived. He looked upset.

“Trouble?” Rick asked.

“Yes. No one left Jackass Flats this morning. No one at all. The people who used the phone are not only cleared and well known, but their conversations were overheard by several others. There’s no chance of a leak-but it happened.”

“Did anyone at this building have the dope?” Scotty queried.

“Not a soul. They didn’t even know at Jackass Flats until after the conference with Winston. That was at eight-thirty. The conference was over by nine. And the information was transmitted from Las Vegas at ten.”

“Anything on the dealer?” Rick asked.

“He was at home in his trailer. He finished working at two this morning, went home, and went to bed.

No visitors at all, and no phone calls. We have his line monitored, so we’re sure.”

Rick shook his head. "It's crazy. There's a missing link somewhere."

"Yes, and we'll find it," Aster said positively. "Now, let's get to work. Jimmy will pick you up at two-thirty. You'll make a dry run to the station, unload, set up, break down, and come back. Tomorrow morning you'll dry run again, but this time we'll give you a beeper unit to plug in and record your beep just to make sure we have a clear channel. Okay?"

"Check," Rick said, and Scotty nodded.

They went over the equipment once more, before loading it into the jeep. Rick worked absent-mindedly and almost got his finger caught as Scotty closed the lid on one box.

"Sorry," Scotty said. "Didn't mean to clip you."

"You missed," Rick replied. Clip you . . . clip ... he felt something stirring in the back of his mind. There was a connection . . .

Jimmy arrived, bringing a dust storm with him as usual. When the dust subsided, they loaded the equipment into the helicopter, lashing it into place under the pilot's direction. "Got to balance the load,"

Jimmy explained, "or we'll wobble through the air. Remember these positions. Use them every time."

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On the way to the peak, Rick tried to bring forth the nagging bit of data at the back of his mind. Clip. It rang a faint bell. The redheaded lieutenant had been clipped . . . that wasn't it. He gave up and studied the helicopter cabin, noting how each piece of equipment was lashed securely, or held in place by other means. He supposed it wouldn't do to have stuff adrift, so that a sudden drop or lift while maneuvering could send it flying. Even the emergency flashlight, a long, six-battery job, was held by clips. . . .

He yelled, "The fishing rod!" No one heard him; he couldn't even hear himself, because he had not pressed the "talk" button on his mike cord. The Jones Boy had brought along his fishing rod just to work on it ... only the pole fitted into clips above the counter! No one put up clips for something temporary.

Clips were for permanent placement. So the fishing rod, and probably its mate in the other Jones truck, was a permanent part of the

equipment. Rick settled back in his seat. Why would a fishing rod be permanent equipment in a desert? He had a notion, but needed more information. He intended to get it as soon as they returned.

The helicopter settled to the station site, and the boys got their equipment out and set it up, working by check list, while Jimmy experimented with hanging the parachute cloth as a sun shield. It didn't work.

"Not big enough," he said. "An acre of cloth to shield the mighty sun. That's what we need. How about two rides for my rigger friend?"

Rick grinned. "Promise him anything, but get the cloth."

"Will do. When we finish, I'm going over to Nellis. This busy beetle has a small click in the rotor shaft.

Nothing serious, but I want to let my mechanic know. I will then wander down to the parachute loft and have a word or two with my friend the rigger. I may have to promise him your best necktie, too, but I won't hesitate."

The boys finished setting up, then tore down the equipment again and restowed it in the cases, carried them to the helicopter, and lashed them in place.

Scotty mopped his brow. "I used to think dry runs like this were silly. But they're essential. Every time we've set up, we've learned something new."

"They make sense," Rick agreed. "Even though it's a pretty tiresome way to learn." His mind wasn't on the dry runs, though. He was thinking about the information leak again.

He continued to think about it as the helicopter started back. The blackjack dealer was the key. If the intelligence boys were sure the dealer had had no visitors or phonecalls, that could mean only one thing: the man had the dope when he left work and went home.

But he couldn't have the dope, because no one knew until the morning conference, except . . . Winston.

Winston and Gordon had talked it all out when they returned from the test site! Had anyone been listening in? Rick tried to recall.

He and Scotty had been swimming when the two arrived and went

into the Winston cabin. They had gone to join them, not bothering to change from their trunks. Scotty had remarked that one Jones Boy was busy in the truck.

Rick pushed the intercom button. "Scotty! Last night you saw one Jones Boy in his truck. Did you see the other one?"

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Scotty thought about it. "I think so. I think I saw him going into his cabin when we walked down to meet Gordon and Winston. Why?"

"Trying to account for their movements. I have an idea, but I'm not sure it's any good. I need more dope. Where were the girls?"

"They stayed at the pool for a while. I think they returned to their cabin when we broke up and went to get dressed."

"Thanks. I'll tell you about it when we can talk quietly."

"This is quiet," Scotty said. "After all, we're on a communications circuit."

"Circuits sometimes leak. I'd hate to think what we're saying was being broadcast on the chopper's air-to-ground circuit."

"Okay. Later."

Rick continued his line of thought. The girls could see the cabins from the pool. They would have said something if one of the Jones Boys had been near any of the Spindrifters cabins. He could assume that the Jones Boys hadn't been listening at door or window, then.

By the time he carried his analysis to its logical conclusion, Jimmy was landing. The boys unloaded the cases into their jeep, showed their badges to the guard at the runway fence, and drove to the storeroom as Jimmy took off again.

Rick didn't wait to unload the cases. He said, "Come on," and ran for Aster's office, Scotty close behind him. Aster wasn't in.

"See if he's around," Rick said. "I'm going to call the girls and put them to work. If he's here, I'll tell you both what I think at the same time."

Each of the cabins had a phone, connected to the main building. Rick called, then had to wait while Jan and Barby were summoned from

the pool. Barby came on the line. "Rick? . . . What is it?"

"Listen, Barb. Get some change, go to the main building, and call me back on the public phone. Here's the number." He read Aster's number from the phone. "Hurry up, now."

"All right."

Rick hung up and glanced at his watch. It was nearly three-thirty. He waited as patiently as he could, and lifted the phone as it rang five minutes later. "Captain Aster's office."

"It's Jan, Rick. Barby and I are in the booth at the lodge. I guess you didn't want to talk on one of the switchboard lines."

"Right." Jan was quick, Rick thought appreciatively. "Listen, Jan. I want you two to check the Winstons'

cabin for bugs. I have a hunch Gordon and Winston were overheard last night. Check carefully, without any conversation except normal chatter. You know what to look for. The phone is ruled out, because the line doesn't go anywhere but the lodge switchboard. A transmitter about the size of a Megabuck unit is most probable. Call me back if you find anything."

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"All right, Rick. We'll get to work."

Rick hung up. Now he needed Aster, or an electronics expert. He started out and met Scotty in the doorway.

"Aster, Murphy, and Gordon have gone to a meeting at Mercury," Scotty reported. "Guess what on?"

"Couldn't imagine," Rick said grimly. "That leaves Ray Harmon. Let's go see him."

Ray Harmon was Aster's boss for the tracking operation, but not for intelligence operations. They hadn't seen him since the first day, except at a distance.

Harmon looked up as they walked into his office. "Hello. You're on Aster's crew. What can I do for you?"

"We need to talk to an electronics expert," Rick said. "Preferably a specialist in communications. Can you tell us where to go?"

Harmon motioned them to chairs. "I've been called a communications engineer when not being called other things by my enemies. What's your trouble?"

"This isn't connected with tracking," Rick began. "But it may be connected with the project. Can you tell me what kinds of microphones can pick up sounds at a distance? I mean directional mikes."

"Sure. There are two kinds, broadly speaking. One that commercial TV stations use is tubular, pretty small, usually made of a specially cut piezoelectric crystal. The way the crystal is cut and shaped gives it high directional quality. Then, there's the parabolic collector with a mike at the focus."

"How small would a crystal mike be?" Rick asked.

"I've seen them about an eighth of an inch in diameter, although most are somewhat larger."

"That's it," Rick said softly.

"What's what?" Harmon asked, and Scotty added, "Give, buddy!"

"The Jones Boys carry fishing rods," Rick explained. "They're mounted in clips over the counter. They spend hours working on them. What I'm betting is that those fishing rods are just camouflage for directional mikes. The Jones Boys have been picking up project information by listening to conversations when people thought they were far enough away from outsiders to be safe!"

CHAPTER XII

Fire on the Mountain

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Ray Harmon reacted by picking up the phone. He dialed swiftly, waited for an answer, then said, "I have to speak to Captain Aster. He's at a security meeting there."

Rick and Scotty waited while Harmon drummed his fingers on the desk. He looked up at them. "If the Jones Boys are really the leak, it doesn't solve the problem of how the information on the nuclear test run got out unless the security officer at Jackass Flats can show that someone talked about it within range of a directional pickup."

Rick was about to reply that he was waiting for information on that point, but was saved from commenting when Harmon spoke into the phone again. "What? . . . When did they leave? . . . Okay, I'll try him there."

Harmon cradled the phone. "The whole group left Mercury and went to Scarlet Lake. They should reach there in about ten minutes."

"We'd better stow our equipment," Scotty said.

Rick added, "We'll be at Captain Aster's office if you need us."

As they left, he thought to himself that announcing his idea that the Winstons' cabin was bugged might not be a good one. It could get the scientists in trouble. Better wait to see what developed.

Scotty checked his watch. "Jan and Barby should be calling back."

"Not if the Jones Boys were clever. They wouldn't hide a bug in the obvious places. The girls might have to search a while."

"True," Scotty agreed. "Meanwhile, let's lug this equipment back into the shed."

They completed storing the gear in a few minutes, and settled down in Aster's office to wait. Fifteen minutes passed, then a half hour. Rick began to wonder. The girls had had enough time to go over every inch of the cabin. He debated calling them, but before he could ask Scotty's

opinion, a man from one of the other teams ran into the office.

“Don’t you two live at Aspen Lodge?”

“Yes,” Scotty said quickly. “Why?”

“Forestfire. The base fire department is taking off right now. A jet from Nellis just landed, and the pilot said the fire was in the pines right above the lodge.”

Rick and Scotty were gone on the echo, leaping into their jeep and roaring toward the gate, with Scotty driving. As the guard checked them out, they heard the scream of sirens as the Air Force fire department vehicles, a specially equipped jeep and a tank truck with high-pressure pump, reached the highway and started south.

They checked out at the main gate and Scotty swung the jeep onto the highway and pressed the accelerator to the floor.

“Easy,” Rick cautioned. “The pilot said the fire was above the lodge.”

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“It could reach the lodge,” Scotty said.

“Not likely. The heat rising from the desert creates a thermal column that carries the wind up the mountain. The forest fire will add to the effect. Don’t worry, the lodge is safe enough.”

“I hope you’re right.” Scotty let up slightly on the gas pedal.

“Fine,” Rick approved. “Now you’re only driving like a wild man instead of a madman. Keep in mind that this vehicle has a high center of gravity.”

They rode in silence for a few minutes, then Rick said aloud what had been on his mind. “Do you suppose the fire is the reason the girls didn’t call?”

“Possible,” Scotty said.

As they turned into the road leading to the lodge they saw other cars ahead. Rick thought they were probably volunteer fireman. A fire in this part of the country in summer was serious business, because the woods were dry. Pine forests were especially bad because of dry needles underfoot and a heavy content of flammable resin in the wood.

Crews were already assembling to fight the fire when they reached the lodge. Mrs. Winston was standing near the main building, apparently arguing with a big man who held a shovel in his hand.

Rick could see the fire, perhaps a thousand yards up the mountainside. It was a solid wall of flame that extended in both directions, and it was spreading rapidly. When Scotty shut off the motor they could hear its roar, and an occasional explosion as the moisture in a tree turned to steam under the intense heat.

Fortunately, the wind wasn't strong, but Rick knew it would increase as the hot air from the fire rose, creating low pressure into which the cooler ground wind would rush, to be heated in its turn and continue the feeding process.

The boys hurried to Mrs. Winston's side in time to hear her say, "But you've got to do something!"

An icy chill ran down Rick's back. "Something about what?" he demanded urgently.

Mrs. Winston turned, and her face was streaked with tears of fright. "Oh, boys, the girls are in there!"

Rick's throat dried up with sudden fear. He pointed to the distant wall of flame. "There?"

Scotty asked, "How do you know?"

"The . . . the people next door to you. The old couple. They were coming back from photographing something, and they saw the girls running through the woods. By the time they ... I can't remember their names ... by the time they got back here the woods were already going up in flames."

"Maybe the girls ran around the end of the fire," Scotty said hopefully.

The big man shook his head. "I'm afraid not. We sent men out to both ends to fight the fire, and told them to report back at once if they saw the girls."

"We'll have to go in after them," Rick said desperately.

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"You can't." The big man left no room for doubt. "And you can't get

around, either. The fire is moving faster than a man on foot could outflank it, and the terrain is too rough even for jeeps.”

Rick stared at the wall of flame that soared to the very tops of the tall pines. Barby and Jan, in that? They had to be gotten out. He refused even to think that they might already be victims of the fire.

“Scotty,” Rick said desperately, “we’ve got to do something!” He started for the main building at a dead run.

CHAPTER XIII

Hunt by Chopper

A man was talking on the phone in the main building when Rick and Scotty dashed in.

“Get more men out here,” he said emphatically. “Unless we manage to get a firebreak built at the north end, it will burn right into Charleston Mountain. It will burn itself out on the south and east. But it’s big, and you’d better move fast.”

Rick said urgently, “We’ve got to use the phone. It’s a matter of two girls’ lives.”

The man looked up, “The two who were lost? I’m afraid it’s too late.”

“It will be unless we move!” Scotty snapped. “Let us use the phone. It will only take a minute.”

“Okay. Make it brief.”

Rick took the phone and dialed the operator. When she answered, he said, “Operator, this is an emergency. Two girls’ lives hang on speed. I have to talk with Nellis Air Force Base, a lieutenant by the name of James Taylor. He’s a helicopter pilot, and he may be with his mechanic or at the parachute loft.”

“I’ll try. Hold, please.”

Rick heard the operator dial, then say, “Nellis, I have an emergency call for Lieutenant James Taylor, a helicopter pilot. He may be with his mechanic or at the parachute loft. Hurry, please.”

The Nellis operator answered, “Right away. I’m connecting you with Operations.”

A male voice said, “Captain Kozack, Operations.”

“Captain, an emergency call for Lieutenant James Taylor. He may be with his mechanic or at the parachute loft. He’s a helicopter pilot.”

Rick silently urged speed. He was sweating profusely, and his stomach was tied in knots.

“Hold, operator. I’ll try the intercom.” Rick heard the officer’s voice. “Repair and Maintenance. Is **Page 53**

Lieutenant Taylor there? . . .Emergency.”

In the distance, flat and distorted by the intercom loudspeaker, came the reply, “Sir, he left fifteen minutes ago.”

The captain again spoke. “Parachute loft. Is Lieutenant Taylor there?”

“Sir, he’s just walking out the door.”

“Get him, quick.Emergency.”

In a second Rick heard Jimmy’s voice over the speaker. “Lieutenant Taylor, sir.”

“Emergency phone call,Taylor.Stand by. We’ll put it through.”

Rick almost sobbed with relief when Jimmy came on the line. “Taylorhere.”

“Jimmy, this is Rick. The girls are trapped by the forest fire near the lodge, and we can’t reach them by foot or jeep.”

The pilot responded instantly. “Meet me at the first level space you come to on the way down from the lodge. I’m fueled and ready to go. Be there within fifteen minutes.”

“Sooner,” Rick pleaded. “Minutes count. Hurry, Jimmy.”

“Coming.”

The phone slammed down at the other end. Rick paused long enough to say, “Thanks, operator.”

“Good luck,” the pleasant voice said.

“He’s coming,” Rick told Scotty, and let his breath out with a long whoosh.

“Come on,” Scotty urged. “Let’s tell Mrs. Winston. She’s frantic.”

Mrs. Winston wasn’t cheered by the news. She was sure it was too late, and looking at the wall of flame Rick wondered if she might not be right. But he refused to believe it. Those two aggravating, amusing, difficult, loyal, adventurous girls killed by a forest fire? It couldn’t

happen.

“They’re not the kind who come unglued in a crisis,” Scotty said as they ran to the jeep. “At least, not when they’re the ones in danger. If there’s a way to beat the fire, they’ll find it.”

Rick nodded wordlessly. The only time Jan and Barby had lost their nerve and broken down had been when their fathers were in danger. And, Rick recalled, Barby had gone into a spin after he had crashed in the Cub, before she knew Scotty was still alive.

Scotty drove the jeep through the aspens down to the desert, now and then pulling aside for loads of men who were arriving to battle the blaze. As they reached the treeless area, Rick had a sudden thought.

“Did you see the Jones Boys?”

“Their trucks are parked next to their cabin. I think I saw them going off with shovels, but I’m not sure.

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Why?”

“Just wondered. And I wonder what the girls were doing in the woods when they were supposed to be calling me?”

Scotty shook his head. “They must have had something on their minds, but I can’t imagine what.”

“We should have questioned Mrs. Winston.”

“Time enough for that later,” Scotty said grimly.

The road crossed a saddle between two gullies. There was room enough for Jimmy on the saddle.

Scotty pulled over to the side of the road, leaving plenty of room for the helicopter to land. They waited, as patiently as possible, now and then casting glances back the way they had come.

Smoke rose high above the trees between them and the lodge. Now and then sparks shot up, and once flame licked high in the air.

Rick couldn’t sit still. He got out, and Scotty joined him. They studied the lay of the land.

Behind the relatively flat area on which the lodge was located, the mountain began to climb, gently at first, then more steeply. The slope increased, and then rock rose to form a solid wall of varying height.

Rick couldn't see it from where they stood, but he remembered from flying over it that one spur of rock rose like a battlement above the others directly above the camp.

The fire would burn out when it hit the rock, because there would be nothing left to burn. It wouldn't take long, he thought.

Scotty must have been reading his mind, for he asked, "How long until it burns out?"

"I was just wondering. An hour? A little more? Maybe only half that. A lot depends on the wind."

The wind was brisker now, coming up from the desert, sucked in by the low pressure left by the rising heat from the fire. Rick could feel it on his face, and he knew it would increase.

Jimmy was on them before they knew it. He swept over the ridge at high speed, spotted them, hovered briefly, then landed with a bump. They were climbing aboard before the helicopter stopped bouncing.

Rick grabbed his earphones and throat mike, pushed the intercom button, and said urgently, "They were last seen running uphill from the lodge, Jimmy."

"Okay. Buckle in. I'm taking off."

The chopper rotor speeded and the ground dropped away with breathtaking speed. Jimmy was wasting no time. He kept climbing until they were high above the tree level, then banked slightly and the fire came into view.

Rick gasped. It looked as though the world was ablaze at first, then as the pilot banked even more, he saw the fire front. It was clearly marked, marching its inexorable way through the pine forest, up the mountainside toward where the rock wall loomed.

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"Did you see the Jones Boys?" Rick asked Scotty

"I'm starting from over the lodge," Jimmy said in the earphones. "We

will fly a straight line up the mountainside, reverse course, and return to the camp. We will then move over a few hundred feet and repeat the process. One of you unbuckle and climb up here with me. Get into the copilot's seat. It will give us better coverage."

Rick started to move, but Scotty's hand on his shoulder stopped him. He answered the pleading look in his pal's eyes with a nod. Scotty unbuckled and unplugged his communications gear, then climbed through the narrow hatch to the compartment overhead, taking earphones and throat microphone with him.

Left alone, Rick kept his eyes on the forest. It didn't matter which of them was up front. Scotty had keen eyes, keener than his own for looking into a forest. And Rick knew his own feelings about the girls were shared by his friend.

"Starting the run," Jimmy said.

Rick acknowledged.

"Scotty, look 45 degrees down and front. Rick, look 60 degrees down and out the side. Rick, this is against regulations, but look in the zipper pocket above your head. You'll find a safety belt. Put it on, and you can snap it into the handhold by the door. Scotty and I can see better for this first run, anyway.

Okay?"

"Okay." Rick was already moving. He found the safety belt and put it on, then moved to the doorway and hooked the safety snap on the belt to a handhold. Keeping a grip on the handhold, he leaned out and looked downward into the heart of the fire. It was an inferno of blazing pine, a solid mass of flame. He could feel its heat on his face, and he felt the helicopter buck like a skittish horse in the powerful updraft.

The chopper passed over the wall of flame to where the trees were still green, but wreathed with smoke.

Tiny fires were starting, from sparks fanned out from the fire front. Rick studied the ground with care, hoping for a sign of the girls.

A sudden rise was signaled by the changed pitch of the rotors as Jimmy climbed. Rick saw the top of the rocky cliff go by underneath, then the pilot banked sharply.

Rick had kept earphones and throat mike on; the cord was long enough to reach. Now he heard Jimmy ask, "See anything, either of you?"

"Nothing," Scotty said.

"No sign," Rick added. He was feeling sicker by the minute; his stomach knotted into a tight ball of fear.

The helicopter reversed course and dropped lower as they passed over the cliff to the forest once more.

Rick strained to see every inch of ground along the path 60 degrees down. He caught a glimpse of a deer fleeing from the blaze. Jimmy arrived over the camp, and Rick saw that it was crowded with cars. More men with shovels, axes, and water tanks on their backs were running toward the end where the fire could continue to spread.

Jimmy turned, moving the helicopter to a new track. Again they flew toward the rock cliff, and Rick saw **Page 56**

the tawny shape of a mountain lion climbing the rocks. But there was no sign of the girls.

Jimmy turned once more, this time following along the cliff. "They must have reached the cliff if they're still alive," he said.

Rick nodded to himself. He was so scared that he wasn't thinking straight. The pilot was right. The girls would have run until their way was blocked. It wasn't likely they had reached a spot that could be climbed. Even the agile mountain lion, who spent his life among the rocky slopes, had been having difficulty.

Jimmy flew until he reached the end of the blaze, and Rick saw some of the fire fighters below working to outflank the fire. Most of the men, though, were at the other end. If left to itself, the fire would simply burn out at this end. The men were doing their best to save some of the forest, but it was plain from on high that their efforts would be useless.

The chopper flew back along the cliff, and Rick watched carefully, noting that the forest came right to the cliff bottom, except in a very few places. The fire front was advancing rapidly, and the wind was pushing it with increasing force. Rick saw the camp through the flame and smoke. The helicopter came even with the lodge and continued on along the ridge.

Scotty let out a yell. "I see them! There, below that spur!"

Rick almost lost his footing as he leaned out to look ahead, but he couldn't see anyway, because of the surge of emotion that blurred his eyes. He shook his head and wiped his free hand across his eyes, then focused on the spot ahead and below. Jimmy climbed to get more altitude, then brought the chopper to a hover.

Rick looked down, and his heart sank again. The girls were waving from far below, and he waved back.

But their troubles were far from over.

Under the helicopter was a high spot in the cliffs, a spur of rock about fifty feet higher than the rest, and nearly a hundred feet long. Below the table-rock spur, the cliff dropped almost sheer about two hundred feet to where the girls stood in a clearing at the base of the wall. The clearing was not more than thirty feet long, and about twenty feet at the widest point.

Rick pushed his intercom button. "Jimmy, can you get down there?"

The pilot was slow in answering, and his voice shook. "Not a chance, Rick."

CHAPTER XIV

The Fire Crowns

The helicopter bucked like a wild horse in the updraft from the cliffs, but Jimmy held it steady while the three surveyed the situation below.

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“Ropes from the top,” Scotty said urgently. “How about that?”

For answer, Jimmy swung the helicopter toward the mountain peak, hunting a level spot. “Let’s see where I could land.”

Rick studied the terrain below. From the cliff top the slope climbed steeply, bare of trees, with only an occasional shrub breaking the expanse of jagged rock.

“Ahead,” Scotty said. “How about there, Jimmy?”

“It’s about a half mile from the cliff top,” the pilot answered. “If men landed there, they’d have a tough time climbing down to the spot above the girls. I’d guess it would take nearly an hour. Maybe more.”

“Can’t you land on that table rock above the girls?” Rick asked desperately.

“Above the girls? That was my first thought, but there’s not enough room with that thermal column climbing the cliff face. It would bounce us like a rubber ball. I couldn’t even be sure of crash landing in the right spot, and killing everybody wouldn’t help the girls.”

The helicopter turned back and came to hovering position high above the spot where the girls waited. It rocked and swayed even at that height. Rick tried to gauge the speed of the fire. They had about thirty minutes, he guessed. Not much more.

“Could you hover while we climbed down a rope?” he asked.

“Let’s see,” Jimmy answered. He slowed the rotors and the helicopter drifted lower, bouncing fiercely in the updraft. About fifty feet above the cliff, a rush of air caught them and almost flipped the big machine over. Jimmy fought it upright again.

“There’s your answer,” Jimmy said. “If I had a winch aboard with a hundred feet of cable, it might be worth a try a little distance from the cliff, but even that would be chancy until things cool a little.”

A flash of fire caught Rick’s eye and he looked outward in time to see the top of a huge pine explode into flame. The rushing wind threw fire at the next top, and it caught.

“The fire’s crowning!” Jimmy yelled.

Rick had never seen it, but he knew what the pilot meant. Once a forest fire crowned, it raced with deadly speed through the treetops, while the forest burned behind and below the crowning blaze.

Rick watched with horror. Their time was cut to less than a half hour now. He had to get down there, He had to rescue the girls!

“Head forScarletLake !” he yelled.“Top speed, Jimmy! I have to get a parachute!”

“That heat would blow you all over the sky,” Jimmy objected as he swung the chopper around and poured on throttle. “You couldn’t be sure of landing anywhere near them!”

“The belt,” Rick said. “Illgetthe belt. If the wind catches me, I can use it to steer.”

“It’s the only chance,” Scotty agreed, desperation in his voice. “If one of us can get down to the girls **Page 58**

with shovels, maybe we can dig in until the fire burnsitself out.”

“Okay,” Jimmy said. “It’s not much of a chance, but we have to try. Now quiet, while I get things set up.” He switched to the command channels and called, “Mayday, Mayday, Emergency! Clear the channel. This ishelicopter Red Three calling Nellis.”

“Nellis to Red Three.What is your Mayday?”

Mayday was the verbal SOS, Rick knew, and it caused instant silence on the radio channel, with everyone straining to hear and to help.

“Two girls in a forest fire.We have to drop a jumper and we need a chest pack. Repeat.A chest pack.

Can you load one in a jet and get it toScarletLake ? Minutes count.”

“Nellis to Red Three.Wilco.”

Jimmy called once more.“Red Three toScarletLake.”

“ScarletLake, here.We heard your request to Nellis. What can we do?”

“Rick Brant’s rocket belt is in Shed Two, in the locker next to the front door. Get Burns and Willis to refuel immediately. Also get and have ready a three-hundred-foot coil of quarter-inch nylon line or equivalent, a shovel, a jerry can of water, and a crash helmet. Have them where the jet from Nellis will land. We have only minutes. Can do?”

“We’re on it.”

“Okay. Captain Aster is around there. He knows about the belt. Have him supervise if available. And have some short pieces of line to lash the stuff to the jumper. We’re heading your way at top speed.

Hurry!”

“Wilco, Red Three.I plugged your call into the general intercom circuit, so all hands are working already.

Will you need fuel?”

“Negative,ScarletLake.My reserve is ample. But if you have a chopper pilot there, have him stand by. I may need a copilot to help me hold this beast over the thermal updraft.”

“Roger, Red Three. Call if you need anything else.”

“Thanks,ScarletLake . Be there in five minutes.”

Rick moved to his regular seat and sat down. From his pocket Rick pulled out the scout knife he always carried, and started slicing his handkerchief into strips. There would be no time to change clothes. He would have to go as he was. He used the strips of cloth to bind his pants legs into place so they wouldn’t flap and be a hazard. It was all he could do until they arrived.

Scotty spoke on the intercom. “I’d better make the jump, Rick.”

“Sony, Scotty. I’ve had more experience with the belt, and even I haven’t had enough for this. I’ll make the jump.”

Rick knew Scotty could see the sense of it, but the dark-haired boy tried again, anyway. "I wish you'd let me go, Rick."

"I wish we could both go," Rick said as calmly as he could. "But we have only one rocket belt."

"I could take another chute and jump higher up on the mountain where the updraft isn't so bad," Scotty said eagerly.

Jimmy scotched that idea. "And by the time you worked your way down to the cliff top it would be all over, one way or another. Plus the very good chance that you might kill or hurt yourself. A parachute landing isn't very gentle. I know. I had to bail out once, and broke a leg on level ground."

ScarletLakewas in sight. Rick could see the long runway, the many buildings of the big rocket base. Far down from the main buildings, on Pad Number Eight, a rocket was being assembled in its service tower.

As they came closer, Rick saw the vehicles and men waiting at the end of the runway. A truck was tearing down the hill toward the men, throwing a plume of dust as it traveled.

Jimmy landed just as the truck arrived. Captain Aster jumped out, and the two men from the refueling crew got down from the back, carrying the rocket belt.

Rick leaped to the ground before the dust settled and ran to meet them. The men held the belt while he slipped into the corset and buckled the straps into place. By that time, Scotty was beside him.

"Check it out," Scotty cautioned.

"Okay.Vector control." Rick turned the handle while Scotty watched.

"Vector control okay.Now thrust control."

Rick turned the thrust handle and heard the fuel start its hiss. "Both nozzles clear," Scotty reported.

Captain Aster handed Rick his crash helmet. "Harmon called. I was about to leave for the lodge to see the Jones Boys when you called Mayday. How did the girls get trapped?"

"We don't know," Scotty answered.

The men at the end of the strip had everything Jimmy had asked for.

While Rick sweated with impatience, Jimmy, Captain Aster, and Scotty debated about where to hang the various items on Rick.

A jet flashed overhead, turned, and came into the landing pattern. Rick saw that it was a two-seater trainer.

"The shovel on the left side," Jimmy said finally. "Lash it to the safety ring on the belt. We'll hang the water can from the ring on the right side. You do that, Scotty. I'll secure the coil of line to the upper belt right in front of his chest."

By the time the jet taxied to a halt a few feet away, Rick was fully equipped except for the parachute, but he was having trouble standing up under the load.

A stocky Negro airman, carrying a parachute, came toward the group. Jimmy greeted him with relief.

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"Hi, Tommy. Glad you came yourself. How do we rig this? There's no room for a harness."

Tommy examined the front of Rick's rig. "Can't you just use the rocket belt to let yourself down?"

"Not enough flying time," Rick explained. "If I drop too fast, I can't maintain balance. If I drop slow enough to keep balanced, I'll run out of fuel."

"I see. Okay, this chute is designed to clip onto the front of a harness. We'll put loops of line through the armholes and snap it to those; that is, if the armholes are strong enough."

"They are," Rick assured him. "Fiberglass reinforced with epoxy resin."

"It should do." Tommy accepted the pieces of nylon rope handed to him by one of the men and began to secure them in place. "You ever jump before?"

"No."

"Uh-uh. Well, when your chute inflates, you'll see four straps, each with a cluster of lines. They're called risers. If you want to move in any direction, pull down on the risers nearest to the direction. That

will spill air from the chute and slip you toward where you want to be. Got that?"

"Got it."

"Good. Now, you'll lose altitude fast each time you spill air, so don't do it too close to the ground.

When the ground comes up, relax. Don't try to fight it. Go limp. And one more thing. If your chute doesn't inflate right away, grab the edge of the cloth and shake it out as if you were putting a sheet on a bed. That will inflate it. Just keep your nerve and you'll be okay."

Tommy snapped the parachute to the nylon loops and inspected his work. "It will do. Good luck to you."

Rick shook the outstretched hand. "Thank you very much. I'll need all the luck I've got."

"Let's go," Scotty said. He held the weight of the jerry can of water as they moved toward the helicopter. Jimmy ran ahead of them, another young officer at his side. The two climbed into the chopper.

Captain Aster and Tommy helped Scotty get Rick aboard, lifting him bodily into the opening. Tommy backed away as the captain and Scotty took places beside Rick.

Scotty picked up his throat mike, pushed the button, and spoke into it. "We're aboard. Let's go!"

The rotor blades speeded. Rick swallowed and wet his lips. If only he could do it!

CHAPTER XV

Hit the Silk

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Jimmy Taylor didn't wait to climb. He flew along the contour of the ground with the helicopter wide open. Not until they were flying at top speed did he slant upward, gaining altitude.

Rick adjusted his earphones and throat mike, first taking off his crash helmet. Beside him, Aster and Scotty did the same.

There was a bag hanging over Captain Aster's shoulder that Rick hadn't noticed. The captain swung it around in front of him and unsnapped the flap. He drew out a pair of walkie-talkies and handed one to Rick. Over the intercom he said, "You didn't call for these, but I thought they might come in handy. Now I'm not so sure you have room for one."

Rick hefted his. It weighed only a few ounces, and was not much bigger than his own tiny Megabuck units. "It will fit into my side pocket," he said. "But I'll have to wait until I stand up."

"Okay. If you fall, try not to land on it."

"If I fall," Rick said grimly, "you'll hear the crash of metal even over the rotor noise. I don't know what all this stuff will do to my balance."

"You'll be okay," Scotty said reassuringly. "The stuff is hanging below your normal center of gravity, so it will tend to keep you upright."

"You hope," Rick returned.

"I hope," Scotty agreed, his face worried. "I wish . . ."

Rick put a hand on his friend's arm. "I know what you wish. But it all depends on the belt, and I can handle that best."

"Sure. It makes sense, but I still don't like it."

Jimmy broke in. "Rick, I think we'll have to drop you from about a thousand feet."

Rick considered. "That's pretty high, Jimmy. The updraft can carry me all over the sky at that altitude."

"Yes, but I've been talking to Tommy. He went to the tower and called because he forgot something."

That chute has been packed for over a month. Tommy would have repacked it, but he didn't have time.

And the longer a chute has been packed, the slower it inflates, Tommy says. He also says to drop you upwind, and try to gauge it so you won't be carried too far. The chute acts like a sail."

"I guess he knows best," Rick replied. He rubbed sweating palms on his knees. "But I think a thousand feet is too much."

"Hold while I talk with him again." This time Jimmy cut the intercom into the circuit and Rick heard the conversation. Jimmy repeated Rick's concern, and Tommy answered from the tower.

"The chute will probably inflate in not more than a couple of hundred feet of fall. Maybe you can shave it a little, but I certainly wouldn't drop him from any lower than eight hundred feet."

"You heard, Rick?"

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"Yes. Tommy's the expert. We'd better do as he says."

The rigger's gentle voice added, "I wish I could make this jump for you, I really do. But that rocket belt wouldn't perform for me the way it should. Now, be careful when you use the rockets. If you push ahead too fast, the thrust will start you swinging like a pendulum. Just use thrust gently, to steer a little. If you do start swinging, you can check the swing by pulling down on the risers. Pull against the swing as though you were stopping that rope swing under the ol' apple tree. Okay?"

"I understand," Rick answered. "Thanks, Tommy."

I'll do my best. And thanks for wanting to jump in my
i" place.

"The best is all anyone can do, Rick. Good luck again."

They flew in silence for a few minutes, and then Jimmy spoke on the intercom. "Coming up on the lodge."

Rick, better get ready. Scotty, put on the safety belt Rick used and hook yourself up in the doorway."

It was cool in the cabin, but Rick was sweating. His palms were wet and a lump of ice had settled just under his ribs. He was scared, and he admitted it to himself. But, having admitted it, he pushed the fear aside. He had to do it right. There was no margin for error, no second chance. When he went through that door, it would be final.

As he got up from his seat, supported by Scotty and Aster, he forced himself to plan. His margin wasn't much, and he would have to get the parachute inflated at once. He knew about counting before pulling the rip cord, but he also knew a count wouldn't be necessary in a vertical drop from a helicopter. He needed only to be sure he was clear before opening the chute.

Rick looked down at the pack on his chest and rechecked the position of the rip-cord handle. It was a D-shaped ring, locked in place by a flap of heavy canvas with a snap on it. Better not forget to unsnap it.

Another thing. If he was falling sideways when the parachute opened, the risers would travel across one of the pipe columns of the rocket belt. He would have to try to fall straight, and to keep an eye on the risers as the chute inflated, ready to clear the pipe if needed.

Scotty had put on the safety belt and was now secured to the safety handle next to the door, leaning out and looking downward. Rick moved to the doorway and gripped the handle on the other side of the door. He felt Aster, behind him, rechecking the fastening of his gear.

No one had mentioned the can of water, because everyone knew what it was for. It was to soak them all-Rick and the two girls-if he made it. The wetness would be some protection against the heat.

Rick pushed the intercom talk button and said, "I'll have to disconnect now, Jimmy. Got to put the crash helmet on."

"Good luck, Rick. Try to land on the table rock and lower the rope."

"No time," Rick said. "I'll have to land next to the girls. There wouldn't be time to pull them up."

“Okay.Coming up on target. Disconnect and get ready.”

Rick handed earphones and throat mike to Captain Aster, took his crash helmet in exchange, and put it on, making sure the strap was tight. Aster handed him the walkie-talkie. He moved the shovel to one side and slipped it into his pocket.

His handkerchief was in use, keeping his pants legs in place. He tapped Scotty on the shoulder and made nose-blowing motions. Scotty nodded and handed him a handkerchief, which Rick stuffed into his pocket as a pad for the radio unit.

Scotty pointed ahead and down. Rick looked and saw the girls in the clearing. In the same glance he saw that the flames were nearly upon them. Already bits of flaming twig were falling in the clearing.

The helicopter came to a hover, bucking heavily, over the fire. Jimmy was taking a position from which the wind would carry Rick toward the cliff.

Rick felt queasy as he looked at the emptiness below, but he gulped air into a dry throat, unsnapped the D-ring, and gripped it tightly.

Scotty squeezed his arm and Rick nodded. Scotty held onto him, and Rick saw that Jimmy was swinging the chopper broadside to the cliff. He had a clear view, now, from the fire directly under him to the clearing where the girls were looking up, their backs against the rocky wall of the cliff.

Scotty, his eyes filled with tears, motioned out and down.

Rick nodded. He stepped forward to the very edge, steeled his screaming nerves into some semblance of control, put both feet together, and jumped.

CHAPTER XVI

Rocket Jumper

Rick was no longer conscious of the noise of the helicopter. His first feeling was surprise that he had no sensation of falling. His second was the onset of complete calmness. He was no longer afraid. His thoughts were crystal clear and he moved with sureness to balance himself.

He pulled the rip cord. As though in slow motion, the flaps of the pack popped open and the springs on a tiny parachute snapped out like a miniature umbrella. Rick knew what it was. The pilot chute. It floated upward past his face, followed by a length of cord. The cord pulled a fold of silk from the pack, and then fold after fold unrolled as though by magic, and the main parachute streamed upward.

Rick knew that the parachute was moving straight up, and he need not worry about the risers catching the belt pipe controls. He tilted his head back as the last of the fabric went by his face, followed by the long ribbons of cord that were the lines from which he would soon be suspended. He caught a quick glimpse of the helicopter far above him, and then the sky was blotted out by billowing silk. The parachute inflated with a sound like the snapping of a gigantic whip, and the world went gray in front of Rick's eyes.

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For a moment he hung limply in the harness, shaking his head to drive away the flashing colored lights.

He knew what had happened. From dropping at high velocity he had been pulled up short as the canopy opened. It was known as "opening shock," and it had almost blacked him out.

His vision cleared and he looked down. He was over the flaming forest, and the high spot in the cliff was coming nearer, both in altitude and horizontally. He would make it easily, he thought, but the thought was premature. The rising wind from the blaze caught him and swung him sideways. As Tommy had directed, he reached over his head and caught the woven fabric of the risers to which the parachute cords were attached. He hauled down as he started to swing again, and the swing checked.

He had lost altitude. If his descent continued as it was going, he would slam into the cliff just below the top. He reached up again, and pulled on the back risers. The parachute spilled air, and he slipped backward toward the inferno. The chute inflated again, and he waited.

The ground was no longer coming close. For a moment panic seized him, then he realized the updraft was so strong it was actually holding him in the air. He would have to spill air from his chute. He tried to judge the direction in which he would slip and pulled down sharply. The air spilled from the back portion of the canopy and he slid downward like a board dropping from a wave crest.

Too fast! He let go of the risers, grabbed for the belt controls, and twisted the thrust handle. Flame spewed from the nozzles, checking his fall, Lifting him right into the canopy!

Rick cut the throttle and dropped again, until the canopy inflated fully. But now one of the risers was caught under the water can, and he was tilting sideways. If he turned over, neither parachute nor rocket belt could help him! He swung his legs desperately to balance the drag, reached for the thrust nozzle, and turned it on. He shot upward at an angle, past the parachute canopy. It billowed like a wounded jellyfish and the air spilled from it.

Desperately, Rick twisted to maintain balance, and managed to straighten up. He hauled in on the riser lines for a moment, lessened thrust, started to drop slowly, and hauled in on the lines some more.

It was belt or nothing, now.

He kept hauling until most of the canopy was pulled in toward his chest, then clamped it in place with his elbows and took both controls. He was still over the fire, but the fire was nearly at the small clearing. He tilted the vector controls a trifle and angled downward.

The girls were looking up at him, and he thought they were yelling, or screaming, but couldn't be sure.

Then, as he came closer, he heard a faint cry, "Be careful, Rick!"

It made him grin. He couldn't help it.

The extra gear made him unwieldy and disturbed his control. He checked his descent a trifle with more thrust, and slanted more sharply inward toward the cliff. Only feet to go, now. He spread his feet wide to take the load when he landed, and skimmed the still

green top of a tree as he descended the last few feet.

He landed standing up, and the girls ran to him, both babbling.

“Rick, you idiot,” Jan sobbed. “You might have been killed!”

“Why did you come?” Barby wailed. “Now you’ll be burned, too!”

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“Cut it out!” Rick snapped. “Let’s get busy. Untie the shovel, Barby. We’ve got to dig in and cover up until the fire burns out, and we’ve only a few minutes left.”

He was busy as he spoke, unsnapping the parachute snaps from the nylon loops. Jan helped, gathering the canopy into a bundle in her arms. It came free and Rick helped Barby with the shovel. Even as he took it, he realized why no trees grew in the clearing. There was only a thin layer of moss, and under the moss was solid rock!

There was only one hope. If they could dig under the belt of trees nearest the clearing, there might be a chance. The rocket belt was still heavy in spite of the great amount of fuel expended. But precious moments would be lost in taking it off, and Rick could see from the fire front advancing swiftly toward them that every moment counted. He was sure there wouldn’t be enough moments.

He scraped pine needles away to bare earth and drove the shovel in. He hit a large root. Naturally, he thought. The tree roots, unable to spread into the rocky area, would be thick at its edge. He tried again, and a clump of dirt turned over but didn’t come loose. Tiny rootlets, strong as cord, held it in place. Rick struggled against the weight of the rocket belt and drove the shovel in with all his strength, then pried. A clump about four inches square came out.

It was no good.

He threw the shovel down and turned to the girls. The fear in their eyes reflected the growing hopelessness in his own. They could see the situation for themselves.

For a heartbeat he looked at them. Their faces were streaked with soot and dirt, and they were scared, but they were under control and their heads were high.

“We can soak the parachute in water,” he said. “If we get under it, the

water will help some.” He didn’t add the obvious: until it evaporated under the heat.

He reached into his pocket and got his scout knife. Barby was already getting the chute from where Jan had placed it. Rick slashed the rope that held the water can to his waist. “No time to do much fancy wrapping,” he said. “We’ll just wad it up and soak it, and hope we don’t spill any water. We’ll need it all.”

Jan spoke hesitantly. “How much fuel is left, Rick?”

He shrugged. He didn’t know. “I’m not sure how much I used on the way down. At least a half or more.

Some is left, anyway.”

“Enough for a single flight to the top?”

“Maybe. If the belt didn’t have so much weight to carry, I’d say yes positively.”

Jan’s dark eyes locked with his. “Rick, give Barby the belt. I’ll stay here and wait it out with you.”

Barby came up with the parachute. “You’ll do no such thing,” she said. “It’s all or nothing.”

Rick turned and gauged the oncoming fire. Already he could feel its breath scorching his face. There was a steady shower of burning twigs.

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Their chances were about zero. Exposed on the rock, even covered with the wet parachute, they would be cooked. He knew it wasn’t just the immediate flash of the crown fire they had to worry about. The forest would burn to the edge of the clearing, and the tremendous heat would be reflected back from the face of the cliff. And the three of them would be caught like biscuits in a camp oven, to roast slowly. The parachute cloth would dry in minutes, then turn brown as it scorched, until they had to throw it off and expose themselves to the terrible heat.

One chance remained, and Rick knew it was a slim one. But it gave a choice. Die slowly, or perhaps quickly.

“All or nothing,” he said hoarsely. “Maybe both.”

CHAPTER XVII

High Jump

The long rope attached to the front of Rick's belt harness had been Jimmy's idea, in case he could land on the table rock and pull the girls up. But Rick had rejected the idea because he knew there wouldn't be enough time. Now, though, the rope would come in handy.

He slashed off lengths of it, then took the parachute and directed the girls to hold part of the canopy stretched between them. He sliced with his knife, cutting between the pie-shaped gores that formed the chute, obtaining long pieces more than a yard in width. The girls helped silently, knowing that conversation would only slow them down.

Rick cut off two more pieces, making them square as he could without delaying, and told the girls, 'Put them on. Like the scarfs you wear when your hair's a mess. Only leave flaps to pull down over your faces.'

As the girls followed instructions, he bent his knees and picked up the water can. A flaming brand landed on the back of his hand and fell off, leaving a streak of black. It hurt. He shook the hand and then ignored it.

The girls had tied on the parachute scarfs. He unscrewed the top of the can and opened it over Jan's head. Water cascaded down, drenching her. He moved to Barby and gave her the same treatment, leaving water in the can for more soaking.

For the first time, he noticed that the girls were wearing their jodhpurs. He was grateful for that. The twill cloth would protect their legs, but he made sure by drenching them in turn. A little water was left. He opened the can over his own head, making sure the water ran mostly down his front. There was a steady rain of burning twigs now, and the fire was so loud he had to raise his voice.

"Jan, arms over your head." As she held her arms up, he wound one of the long cloths around just below her armpits, leaving enough for a secure knot. Then he took one of the lengths of rope and wound that around the cloth, tying it tightly, but leaving long ends dangling.

“Your turn, Barby!” he shouted.

His sister obediently held up her arms and Rick tied her tightly into the folded parachute cloth. Without the cloth padding, the ropes would cut into them cruelly. Even with the cloths, it wouldn't be fun. He roped Barby tightly, again leaving ends dangling.

“Now both of you come close to me, in front.”

They crowded against him. He took the loose ends of rope and tied them to the rope rings through his harness armholes, the ropes to which the parachute had been fastened. When he was sure they were secure, he handed Jan his scout knife.

“Hold onto it. We may have to cut ourselves loose.”

A big branch crashed to the ground behind him, and Rick looked up in time to see the tree overhead burst into flame. Steam was rising from the wet cloth as he gave final directions.

“Barby, hold onto Jan. You'll hang a little below me, but you must stay in front or the exhaust will burn you.”

Barby's voice was steady. “Can we make it?”

Numbers ran through Rick's head like a flash. At full thrust the belt could just lift about five hundred pounds. The three of them together weighed nearly four hundred. He didn't know how much fuel they had-how long he could maintain full thrust.

“We can try.”

“We'll make it,” Jan said confidently. “I'm lucky. And I'm especially lucky to know two people like you.”

Let's go, Rick. It's getting hot.”

Rick reached for his controls. He glanced upward, searching his mind for details. If he could rise above the trees, then turn left, he could land on the lower part of the cliff just beyond the tall table rock. The extra height of the taller portion was too chancy.

“Bury your faces as best you can,” he ordered. “I have to face the cliff, which means you'll be partly exposed.”

The heat and smoke were so bad it was hard to breathe. Rick's eyes were watering as he checked the position of the vector control, then slowly opened the thrust control. He felt thrust build, felt the load of the belt lighten. He kept adding thrust, and lifted into the air. The ropes holding the girls to him tightened and they grabbed each other. He lifted higher, and Jan's head was just below the control handle, while Barby's rope was a bit longer, leaving her head just above his belt.

Rick held his breath, trying by sheer will power to start them moving. He opened the throttle wide and they lifted upward, the girls clinging to each other.

Full thrust, and they accelerated the slightest bit. It was like some of his dreams, running away from some unknown terror, legs slogging through air like molasses. He willed them upward, saw the cliff face move slowly downward, like the view from an ancient elevator. They reached treetop height, and the **Page 68**

blast of heat from the flaming pine tops shriveled the skin on his legs even through his trousers.

He looked upward and saw that he was nearly clear. When he shifted direction, he would lose a little altitude. Maybe it would be a lot, with this extra load. He kept climbing, while sweat poured from him and dried almost instantly in the terrible heat. He moved the vector control, and saw by the cliff that he had lost a little altitude. He angled upward, ever so slowly, almost holding his breath. Maximum fuel flow.

How much was there left?

He knew the risk. He had known it when they began the last jump. If the fuel cut out now, they would drop to the rock below. Luck, if that happened, would be to die quickly.

Feet to go, now. Ten feet, nine, eight, seven, six. He had to angle a bit more. Just a bit. Eight feet. They had lost ground. Seven. Six, five, four, three, two . . .

Rick's face came even with the cliff top. His whole body was racked with the strain of trying, foolishly, to lift them.

His waist was even with the top now. The top was rough. They had about four feet of fairly clear space before the boulders began.

He was higher than the cliff now, but the girls weren't. He had to get higher! The cliff top was five feet in front of him. Higher!

He looked down. Barby's feet were lowest, and they would clear. Only he would lose altitude when he moved them in.

Four feet above cliff level for Barby's dangling feet. It was time. Let it be quick!

He brought the vector control to near level, and they shot ahead, losing altitude. Quickly Rick corrected.

They were over the cliff now. Over it! But he had to let down slowly. He couldn't risk hurting the girls now that they were almost safe. He started to retard the thrust-and the fuel ran out.

For perhaps a half second Rick's strength was near superhuman as adrenalin slammed through his bloodstream. Without conscious thought, he grabbed the girls and hauled them upward and outward, swinging them on the pivot formed by the tying ropes.

They were in the air when he hit.

He hit hard and one leg twisted under him. He heard it break, felt the lancing pain through his thigh as he drove forward toward the reaching rock with the full weight of the belt and the girls on him.

Rick couldn't break his fall. His hands were full of girl. The edge of his crash helmet splintered as it met rock, then the cushioned front part above his forehead crushed at the full impact.

Rick didn't even feel it. The blackness was instantaneous.

CHAPTER XVIII

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A Suggestion for Scotty

The four in the helicopter had been silent, horrified witnesses to the whole affair, hanging above the clearing as Rick plummeted to the earth below, breathing at last when his parachute opened, then holding their breath again at the wild gyrations that preceded his shift from parachute to rocket belt.

Scotty, leaning far outward, oblivious to the rising heat and smoke, had seen Rick try to dig, had watched his failure, and had instantly understood his friend's intention when the slicing of parachute cloth began.

"No!" Scotty shouted. "You haven't enough fuel!"

But the husky ex-Marine knew, as Rick had known, that there was no other chance. Once Rick had found they could not dig trenches that would provide at least partial protection from the reflecting furnace of cliff and burning forest, it was either take the slim chance or cook right where they were.

Scotty raged at his own helplessness, sometimes shouting aloud, but his words were lost in the noise of the beating rotors that kept them suspended as witnesses to the events below. The boy knew only that three of the people who meant most to him in all the world were trapped below and he was unable to do a thing but watch. He had never in his life felt so useless.

The Brants, Jan, and the rest of the Spindrifters were the only family he had. They had adopted him and made him one of them, and he would gladly have given his life to get them out of the holocaust below, but there was absolutely nothing he could do.

With a calmer part of his mind, Scotty knew that it had been right for Rick to make the jump. Rick had more experience with the rocket belt, and that slight margin of extra skill had made the difference. Scotty was sure he couldn't have recovered as Rick had managed to do.

Scotty watched the lift on the overloaded belt, and what to Rick had

been a slow, tortured flight had looked smooth and fast from the plane. Then Scotty had yelled as the belt cut out, and he saw the final spasm as Rick swung the girls upward to safety. He saw Rick slam forward and lay quietly, and his heart almost stopped beating.

The girls were apparently all right. Scotty couldn't see what Jan had in her hand, until he saw her slash her way free, then move to cut Barby loose. He groaned aloud as he saw Barby's arm dangle oddly, and knew that it was broken.

Scotty strained to see more clearly. Rick, inert and with the heavy belt on his back, was hard to turn over, but Jan managed to do it, without disturbing the leg doubled under him. In fact, the way the girl turned him relieved the pressure on the leg, which Scotty was sure was badly broken. She was a good first- aider, and her training showed now, when she needed it most, Scotty thought.

Jan unbuckled the crash helmet and lifted it off, and Barby slid her one good arm under her brother's head and cradled it in her lap.

Scotty could see that Rick's forehead was bright with blood, and his nails bit into his palms as he saw Jan bend and put her head against his chest. Only when she nodded to Barby did Scotty breathe again.

He wasn't even conscious that blood was oozing from his own hand, so tightly had he closed it.

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The pipe controls were bent crazily, where they had helped a little to break Rick's fall. Jan bent one back and forth until it broke loose, then pulled until the cable came free. The girl moved as though in pain, but she moved with purpose. She took the cloth in which Barby had been wrapped, refolded it to use for padding, put it against the blond girl's arm, used the pipe for a splint and lashed it in place with the rope Rick had used to tie her to him.

Below the cliff, the fire was burning itself out, flame vanishing and smoke increasing.

Jan wiped blood from Rick's face, then took the square piece she had worn as headgear, folded it, and placed it over Rick's thigh. Scotty wondered why, then decided it must be because Rick was bleeding.

He couldn't be sure, because Rick was wearing dark slacks. Jan wasn't satisfied. She tried to straighten him a little, and apparently felt

something. Scotty saw her turn Rick a bit and reach into his side pocket.

Scotty knew what she would find. The little walkie-talkie! Had it been broken? He turned swiftly and saw that Captain Aster was watching, too. The officer turned on his own walkie-talkie.

Scotty held out his hand. Aster hesitated for a moment, then recognizing Scotty's prior right to knowledge of his friends' condition, handed it over.

Jan had never seen the walkie-talkie before, but its controls were simple. She turned the single knob on and kept turning it to high volume, then pushed in the button on the side. Apparently she realized she had forgotten something, because Scotty could hear the circuit click off again. She pulled out the fishing-rod antenna, section by section, then pushed the button again.

"Can anyone hear me?"

"This is Scotty, Jan. In the helicopter. Is Rick all right?"

The girl's soft voice was a bit shaky, but clear. "He's alive, Scotty. But he's badly hurt. And he has a compound fracture of the thigh. It's bleeding, but I don't dare put pressure on it because the bone ends might do more damage. Barby and I are fine. Her arm is broken, but it's not compound. Please get help, Scotty. Please? I'm afraid. Rick hasn't moved once. We must have a doctor right away."

While Scotty listened to Jan, Captain Aster had been talking to Jimmy.

"I've called for help," Jimmy told him. "Two more choppers are on the way with a squad of paramedics and a flight surgeon. The choppers are equipped with winches and stretchers, and I think the air is quieting enough so the medics will be able to get down by the time they arrive. Have Scotty tell Jan that."

Aster relayed the message to Scotty, who relayed it to Jan.

"We'll stay right here," Scotty told her. "Just to keep an eye on you and save the other choppers from having to hunt." Then, to help her keep her mind off Rick's condition for a moment, he asked, "How did you and Barby get into the jam?"

"It was the bug," Jan said. "We found it right away. First we turned on Barby's transistor to a noisy station, and started looking. We knew it

wasn't any use looking in the obvious places, but we also knew it would be somewhere near where people might talk. So we started with the table. Do you know how those tables open up so leaves can be put in to make them bigger? That was where we found it, in the little well where the two halves separate. It was taped to the side, and we could tell it was a transmitter."

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The circuit clicked off for a moment. When Jan came back on she said, "Rick just groaned once, but he's still unconscious. I hope those people hurry!"

"They're hurrying," Scotty assured her. "Go on, Jan."

"All right. We didn't disturb the bug. Mrs. Winston was in the lodge, so she didn't even see it. We started to phone you, and then when we got near the Jones cabin we heard the same station we had tuned in on Barbby's radio. It was coming from one of the trucks. We sneaked up and looked in, and there was one of the Joneses. He was sitting in front of a cupboard, and there was a set inside the cupboard, but it wasn't an ordinary receiver. And it had a tape recorder hooked up to it, although the tape wasn't moving. He saw us at the same time we saw him, and he let out a yell and started for us. We ran, but the other Jones came out of the cabin and got between us and the lodge. We had to keep running because they looked . . . well, awful."

Scotty could imagine.

"We knew the little transmitter was good only for short distances, and it had to be the Joneses who had put it there. And you could tell they knew that we knew, and we were scared, Scotty."

"I believe it. I would have been, too. What did you do?"

"We ran for the woods, and they kept behind us. But we could run faster, and we got among the pines."

We saw those old people, but they couldn't help us, so we just kept moving. The Joneses stopped after a while, and we did, too. We could see them talking together. Then they separated, and Scotty-they began lighting fires I"

Scotty's lips thinned to a white line. "Go on."

"I guess they knew we couldn't get away. The fires spread awfully

fast, and we started running, to go around them. But we had farther to travel than the Joneses. They could cut across and block us. So we decided to move right up the mountain. We didn't know about the cliff. When we reached it we moved along it until we got to the place where you found us.

We went into the woods a few times, trying to find a way past the fire, but it was set in a kind of semicircle, and all the little fires had joined into one big one. So we had to go back and wait. We tried to climb the cliff, but we couldn't."

Jan paused. "Scotty, it's the Joneses' fault Rick is hurt. When the other helicopters arrive, why don't you take Jimmy to the lodge and see if you can find them?"

Only the slight tremor in Scotty's voice showed the terrible, seething rage inside. "I may do that, Jan.

Can I say hello to Barby?"

"Of course."

Looking down, Scotty could see Jan holding the walkie-talkie so that Barby could speak and hear.

"Hello, Scotty. We're so worried about Rick. And Jan is hurt, too, even if she won't admit it."

"We'll soon have help," Scotty told her. "Just keep your chin up. Has Rick moved?"

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"No. He groaned once, but he hasn't moved. That's why I'm scared, Scotty. His head hit so hard that he crushed the helmet, and it keeps bleeding."

Aster tapped Scotty on the shoulder and pointed to where two helicopters had just crossed the mountain.

"Help is here," Scotty said. "You'll see the choppers in a minute. Tell Jan to stand up and hold up a bit of cloth so they can see how the wind is blowing."

The other helicopters swooped in under them, and Scotty heard Jimmy on the intercom. He saw the first chopper descend toward the

cliff top where Jan was standing with a piece of parachute cloth hanging rather limply from her hand. The wind had died to a breeze.

Scotty switched to the intercom. "Jimmy, the Jones Boys set that fire deliberately to trap the girls."

"Why," Jimmy said, "I think that calls for a bit of action on our part, don't you? We can't do any more good here. Where do you think these Jones Boys might be?"

"At the lodge," Scotty said grimly. "Acting as though they didn't know what had happened."

Jimmy turned the chopper at once and put it into a long, slow glide toward the lodge. Scotty spoke into the walkie-talkie. "We'll be seeing you shortly. We're going to pay a visit to the Jones Boys."

Jan was on the other end again. She knew Scotty's fighting ability, and his intense loyalty to his friends.

She knew perfectly well what Scotty had in mind. "Say hello to them from Barb and me," she requested.

"I'll do that," Scotty promised.

Jimmy put the helicopter down next to the boys' jeep. The four in the chopper got out and climbed into the vehicle, Scotty in the driver's seat. He swung at once into the lodge road and stepped on it.

When they arrived at the lodge, Mrs. Winston was standing at the end of the row of cabins, looking into the forest. John Gordon and Parnell Winston were with her.

Scotty outlined quickly what had happened, assured Mrs. Winston that the girls were banged around some but all right, and then asked, "Have you seen the Jones Boys?"

They hadn't, but the elderly people in the next cabin had. The Joneses had come sneaking back, climbed into one of the trucks and had driven away. The man added he was sure they were trying to get away from the two military policemen who had asked about them.

"Two of my boys," Aster stated. "I was wondering what had happened after I gave orders to pick up the Joneses."

"They got away," Scotty said bitterly.

“The heck they have,” Jimmy exploded. He asked the old man, “How long ago did they leave?”

“Maybe twenty minutes. Not more. The two military police left about ten minutes after they did. They’d been hunting for the Joneses among the fire fighters, I guess, but the Joneses sneaked around them.”

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“Nearly fifteen minutes to the main road, and five minutes on it at about sixty miles an hour,” Jimmy mused. “But which way did they go? North? Or into Vegas?”

“I’ll vote for Vegas,” Aster said. “That truck is too distinctive. They’ll have to ditch it, and that can only be done where they can get other transportation. Which means Vegas. ”

“I’m for that, too,” Scotty said. “Let’s go!”

Winston called, “Wait! Where will the helicopters take Rick and the girls?”

“Scarlet Lake,” Jimmy replied.

“Then we’ll go there.” The two scientists and Mrs. Winston hurried toward Winston’s car. Scotty turned the jeep and roared back toward the helicopter.

Jimmy kept an eye on his watch as they drove, and was still consulting it as they got into the helicopter and took off.

As Scotty plugged in his headset, Jimmy came on the intercom. “Say ten minutes to the main road, and ten miles down it before we got the word. Add another ten miles just for an extra precaution. My guess is that we’ll intersect them at about the Charleston Peak road.”

Scotty figured rapidly. “That sounds about right.”

“I’m taking a shortcut, heading straight for there, so we won’t see the road until we’re almost on it. Then I’ll climb, and we’ll be able to see for several miles in both directions.”

The pilot sent the helicopter in a beeline for the intersection where Route 39 turns from Route 95. Scotty waited as patiently as he could. As they lifted high over the mountains, he saw that others were on the cliff with his three friends, and he knew everything possible would be

done for Rick.

ScarletLakeHospital.Scotty shook his head. It would be Rick's second trip. Once before he had ended up in the tiny, but efficiently staffed and equipped base infirmary, while solving *The Scarlet Lake Mystery*.

Jimmy took them across the mountains, crossing the ridge only a few feet above the rocks. Then the ground fell away sharply to the desert slopes once more.

As the helicopter came within sight of the road, Jimmy spoke. "Look north. I'll bank a little. You can see the caravan coming." There was quiet satisfaction in his voice.

Scotty looked out and down as the chopper turned. He saw the distinctive pink of the Jones truck about three miles away. A mile behind were two cars with the domes of police lights on top. One was an Armed Forces police car painted Air Force blue, and the other was the white of the Nevada State Police.

Jimmy swung around again and headedSouth . "We need to block the roadway, and I think I see a way to do it."

Scotty saw it, too. Just passing theCharleston turnoff was a big trailer truck.

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The helicopter pilot swooped down ahead of the big truck and the driver braked to a stop. Aster jumped out and ran to the truck. In a moment the driver turned the big rig, completely blocking the highway. Aster stayed with the truck, waving Jimmy on.

The chopper lifted, and flew along the highway, only twenty feet in the air. Scotty couldn't see ahead now, so he took the safety belt and resumed his position at the door. By the time he was holding to the safety handle again, Jimmy had covered most of the ground. The Jones truck was roaring down on them at top speed. Scotty got a glimpse of the two men as they passed underneath. Jimmy spun the helicopter around at once, and followed.

The Joneses saw the truck. They pulled over and stopped before they reached it, and started running.

One headed towardCharleston Peak . The other headed into the valley. Scotty thought he knew what they had in mind. By separating, they

would pull pursuit two ways, increasing their chances for escape.

He set his lips grimly. The Joneses might not know it, but their time was up.

“Let’s take the one going downhill,” Scotty said over the intercom.

“Roger,” Jimmy acknowledged. He paused. “How do we do this?”

“Hover over him and leave it to me,” Scotty said tightly.

Jimmy thought about it, meanwhile putting the chopper on the heels of the fugitive. “Looks as if he’s carrying a gun.”

“What kind?” Scotty couldn’t see, even though he leaned out into the windstream .

“Handgun. Shiny. Could be a .38.”

Scotty looked around the cabin for a weapon. There was none he could see, but his eyes fell on the cushions that padded the seats. They were square, about two inches thick, and fairly heavy.

“Can he shoot us down?” he asked.

“With luck. But he’d have to hit me or a vulnerable spot in the motor. Preferably the motor, now that we have a copilot ready to take over.”

“Go high so he can’t hit the motor, then lower down on him. If he shoots he’ll hit the undercarriage.”

“Or you,” Jimmy reminded him.

“No,” Scotty said. “Not me. He won’t get a clear shot.” He unsnapped the safety belt and got two of the cushions. One he held in his right hand. The other he put at his feet, handy in case he missed with the first one.

Jimmy climbed. In a moment he said, “He’s directly under us. What now?”

“Lower to a few feet over his head, then move sideways so I can see him.”

“I hope you know what you’re doing.”

“I do.”

“Okay.Moving in.”

The helicopter settled, then tilted slightly. Scotty watched as the ground slid past, sideways. He saw Jones just as the man saw him and snapped a shot in his direction. It wasn't even close. Scotty threw the heavy pillow and it caught Jones' arm as he tried to get off another shot. And then the boy left the doorway in a feet-first spring.

Jones tried to duck, but he was too late. Scotty's flying body caught him, feet first, slamming him to the ground. Jones grunted, rolled, and got to his feet while Scotty did a tumbler's roll and came upright again.

Jones was just standing upright when Scotty's fist, with all his powerful body and pent-up fury behind it, caught him squarely on the nose. Jones went over backward, as though hit with a baseball bat. Scotty landed, knees first, on his stomach. The man's breath went out in a strangled whoosh.

Scotty got to his feet and waited. “Get up,” he begged. “Fight back.”

Jones was no softy. He got to one knee and shook his head to clear it. His nose, mashed to a shapeless wad, was bleeding freely. He dove forward suddenly, reaching for the boy. Scotty helped him. He took the outstretched hand and pulled, falling backward as he went. His feet lifted smoothly into the pit of Jones' battered stomach, and he thrust with all his great strength. Jones flew like a great white-clad frog.

He crashed into a cholla cactus, face first, and screamed as the barbed spikes speared into him. He was still screaming when Jimmy and the copilot ran up.

Each move Jones made only sank the wicked barbs deeper. Finally he stopped trying.

“If you'd like to confess to espionage and attempted murder, well free you,” Scotty said. “Talk.”

“I'm innocent!” Jones yelled.

“Let's leave him there for a while,” Jimmy suggested. “It may help his memory.”

“All right!All right! Just get me loose. I’ll talk. I’m being killed.”

“You’ll live,” Scotty said shortly.“Unfortunately.” He looked around and saw the pistol where Jones had dropped it. He retrieved the weapon and blew dirt away. The barrel was clear, and there were three shots left.

“Get me out,” Jones wailed.

There was no easy way, and Scotty wasn’t in the least sorry. They pulled Jones free, leaving a fair amount of hide on the cholla barbs.

“Now let’s go get brother,” Jimmy suggested. “Any rope around to tie up this bird?”

There was none. Scotty took off his belt and lashed the man’s elbows together behind his back. They lifted him into the helicopter, and Jimmy and the copilot got back into their seats.

But by the time the helicopter returned to the road, the situation was under control. The other Jones had been caught climbing over a rocky outcrop, and a bullet through the leg from a trooper’s handgun had
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pinned him in place.

The Armed Forces police took the first Jones off Scotty’s hands.

“Now,” Scotty said to the pilot, “let’s head forScarletLake . We have to see how Rick is doing.”

“I’ll find out as soon as we get some sky under us,” Jimmy told him. As they lifted, he got on the radio.

“Red Three to Red Five or Six.Do you read?”

“This is Red Five. Go ahead, Jimmy.”

“Where are you?”

“Circling to followSix intoScarletLake . We have the kids aboard. The girls are okay, but the boy is still unconscious. Doc splinted his leg and stopped the bleeding, but he’s not in good shape.”

“What’s the outlook?”

“Can’t tell.Doc says he has to be X-rayed. It may be a depressed

fracture.”

“Will he live?”

“If he doesn’t, those two girls will want to die with him. He saved their lives, I guess.”

“You guess right.”

“Okay, Jimmy. Going in now. See you later. Red Five out.”

“Thanks, Dick. Red Three out.”

Scotty stared ahead grimly. The satisfaction of getting the Jones Boys was gone now. The big question remained. How was Rick?

CHAPTER XIX

The Patient

Drums beat in Rick's head. They were huge drums, great hollowed logs upon which gigantic bronze men beat with sledge hammers. Each beat brought lancing pain that stabbed through his head.

He endured the drums because he had no choice. He didn't know the measured strokes were only the steady rhythm of his own heartbeat, pushing his bloodstream through damaged tissue. He didn't even know that he was alive.

Little by little, his great vitality brought him nearer to the edge of consciousness, and he became aware of **Page 77**

sounds besides the drums, of voices like bright splashes against the dark background of pain. He couldn't understand the voices. He was not yet conscious enough to try.

"You're exhausted, Jan. Go climb into the bed next to Barby and rest."

"No, Scotty. I'm going to stay right here."

"You can't help Rick by getting sick with exhaustion, Jan."

"Don't worry about me, Scotty. I'll be fine."

Once there was a great, sudden pang of sheer relief, and consciousness surged upward until Rick opened his eyes, then quickly closed them again as brilliant light lanced into them. In that one instant he had a blurred impression of white, faceless people bending over him before he sank down into darkness again.

"He responded."

"Good. The pressure relief will help. Lucky thing the dura wasn't ruptured. There's no sign of subdural hemorrhage, so we won't need to go in."

The conversation meant nothing to Rick. The words were blurred rumbles interrupting the drumbeats.

He didn't know an Air Force surgeon was skillfully repairing his

battered head.

Then came a time when he seemed to start swimming upward, endlessly, toward a dim light far above.

The darkness around him lessened and he became aware gradually that he had a body, and that it ached.

Something was tugging at him, pulling him by one leg, but he sensed that he wasn't moving. The thing wasn't strong enough to drag him away.

He moved one hand, very slowly, and it was captured and held, gently and warmly.

“Rick, Rick, can you hear me?”

He opened his eyes to blurred semidarkness, and far away, like something seen through the small end of a telescope, he saw a face framed in dark hair, bending over him. He knew that face. He whispered, almost inaudibly, “Hi, Jan.”

He closed his eyes again and let himself sink into the quiet warmth of normal sleep.

When Rick finally came back to full consciousness, a gray-haired stranger was holding his wrist. The stranger was in Air Force uniform, and he had silver eagles on his collar. He said, “So you finally decided a week's sleep was enough?”

His voice didn't work very well. “A week?”

“Well, not quite, although it seems that way. It's three days, to be exact. How do you feel?”

Rick thought about it. He didn't really know, except that his head, chest, and leg hurt.

“Are Barby and Jan okay?” he asked huskily.

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“I'll let you see them for exactly one minute and you can ask them yourself. They're waiting in the hall.

They insisted on staying with you, so we put them next door. One of them has been with you every minute except when we were treating

you.”

The colonel went to the door and opened it. “One minute,” he stated.

Jan, Barby, and Scotty came in. They walked to the bed and looked down at Rick.

He examined their faces silently. The girls were pale from the long days and nights indoors, worrying, but they were unscarred. Barby’s arm was in a cast, but Jan showed no sign of damage at all.

“Both all right?” he asked slowly.

They nodded, and as though at a signal, both of them burst into tears and turned and hurried out.

Scotty shook his head. “What a pair! They’ve stood up like Marines under fire until just now. They know you’re going to be okay, so they relax and come apart.”

“The Jones Boys?” Rick asked.

“In jail. Both banged up a little, one with a bullet in his leg and the other chewed up by a cactus. They set the fire, Rick.”

Rick noticed that Scotty wore a large-size adhesive bandage over the knuckles on his right hand. “Did you get hurt?”

“One of the Joneses resisted a little.”

Scotty didn’t have to elaborate.

The girls came back just in time to be shooed out with Scotty by the colonel. “That’s enough for now.

He’s going to sleep. If he’s well enough by tonight, you can bring in your trays and have dinner with him.”

As the officer came back to the bedside, Rick asked, “What happened? I remember feeling a bone in my leg break and then I slammed forward.”

“Compound fracture of the lower thigh. You’re in traction, if you haven’t noticed.”

Rick hadn’t. He lifted himself for an instant, just long enough to see the pulley at the end of the bed from which a weight was suspended,

pulling against the powerful thigh muscles. The slight effort had exhausted him.

“Your crash helmet saved your life. It crushed in, but it cushioned the impact. You had a depressed skull fracture, with the bone pushing in on the brain.

We operated and relieved the pressure. The bone is wired in place, and healing nicely. But don’t touch the bandages.”

Rick was sinking into sleep rapidly. He managed to ask, “Chest? It hurts.”

“Bad bruise on the sternum. That’s your breastbone. Painful, but not serious. Your fall was cushioned a **Page 79**

little by the pipes on your rocket belt; otherwise, it would have been worse. Now go to sleep. You’re going to be fine, although I admit you hadus worried for a few days.”

“Thanks,” Back whispered. He drifted off into exhausted sleep.

Improvement was rapid from then on. The girls were with him during his waking hours, and at mealtime he had Jimmy, Aster, Gordon, the Winstons, or Scotty besides the girls. His parents and Steve Ames phoned daily. Once Tommy, the parachute rigger from Nellis, dropped in for a chat. Soon Rick was strong enough to sit up, and he and Jan played chess to pass the hours. She beat him by a slight margin of six games out of each ten, and he was both pleased with her, and a little chagrined.

A week after the fire Rick went back to the operating room. Traction had pulled the broken bones back into place, permitting the surgeon to operate. He used a new technique, repairing the break surgically with a heavy splint of specially processed bone-taken, appropriately, from a ram. Then he closed the wound and held the thigh rigid with an aluminum splint. After three days he was satisfied that no infection had taken place, and Rick’s leg was put in a plaster cast that ran from just below his hip to the bottom of his foot.

The heavy bandages on his head gave way to a small pad, and he was given a plastic skullcap to wear for a week. He was practicing walking with crutches when the young, redheaded lieutenant arrived with Captain Aster.

Aster introduced them, grinning. “You’ve met before, but not

formally.”

The redhead looked embarrassed. “I’m glad you were on the job,” he told Rick. “It’s hard to tell how long I might have lain there in the lot if you hadn’t found me.”

“Not long,” Rick assured him. “Someone would have come out to get a car and seen you. What happened to you?”

“Bad judgment, I guess. I was suspicious of the Jones Boys, and I thought maybe a look into one of their trucks would tell me something. So I followed them into Vegas. When they went into the hotel I figured I had a few minutes. I was trying to break in when they came up behind me. The bad judgment was in working alone. I should have told the captain.”

“He will next time,” Aster assured Rick.

“Anyway, you were right,” Rick told the redhead. “If you hadn’t been unlucky, we’d have had the goods on the Joneses before they had a chance to trap the girls.”

“The blackjack dealer broke down last night and agreed to turn state’s evidence,” Aster said. “That’s about all we needed to convict the whole ring. I guess we can consider the case closed.”

That was good news to Rick. With the Joneses in custody, the intelligence officers had called in the FBI and picked up the blackjack-dealer radio-operator and several others Rick hadn’t even known about. It was a well-established, free-lance espionage operation, headed by the Joneses. They had specialized in collecting military intelligence and selling it to Iron Curtain countries. By sheer good luck, the information they had collected and sold about Ramshorn had been of interest to their customers, but not particularly damaging to American security. But had they been able to continue operations, sooner or later the long-distance microphone pickups and other devices would have gotten something really important.

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After a day of practice on the crutches, Rick was told he could return to the lodge until time came to remove the cast. Jimmy came with medics and a Stokes stretcher. They loaded Rick into an ambulance, with Barby, Jan, and Scotty in watchful attendance, transferred him to the helicopter, and flew to the saddle below the lodge. The medics carried him in the stretcher to his cabin. They left the pair of crutches

with him, cautioning him not to try to use them the first few times without help.

Rick didn't want to wait. He wanted to get out of doors where the sun was shining and the air fresh.

"Let's go up by the pool," he requested. "I can get some sun while the rest of you swim. I'll bet you haven't been swimming for weeks."

"Not since the fire," Mrs. Winston told him. "Are you sure you're strong enough, Rick?"

"I'm sure."

The girls ran to get into swimsuits, while Rick, supported by Scotty, began the journey to the pool. The few steps seemed like a mile, and Rick was glad to sink into a chair at the pool's edge and let Scotty prop the damaged leg on another chair.

Jan and Barby emerged in swimsuits, only Barby's whiteness and thinness of arm showing that her cast had been removed the day before. But Jan had a huge bruise on her left side between the two parts of her suit. The bruise had faded to light purple, shading to green and yellow. Rick winced when he saw it.

That must have hurt!

"What did you hit?" he asked.

Jan smiled at him. "Nothing. You did that."

"I did?" Rick was horrified.

"Yes. I guess you grabbed for my belt to throw me out of the way, but you missed and got a handful of me instead."

Rick swallowed. "I'm sorry."

Jan laughed at him. "I'm not. I didn't even notice until long afterward. If you hadn't thrown us upward like that, we'd have crashed into the rock with you and that heavy belt on top of us. I still don't know how you did it. I'd never believe you could throw one hundred and fifteen pounds of me and one hundred and ten pounds of Barby, each with one arm."

"I can't," Rick said with a grin, and he meant it. "I'm just not capable of lifting that much weight with one arm."

Jan adjusted her bathing cap and poised to dive.

Barby wrinkled her nose at Rick and Scotty. “I guess,” she said, “that these two are capable of doing whatever needs to be done, even if it’s impossible.”

Rick watched the two slim figures cut the water surface almost without splash. He knew his limitations, but he was glad he had exceeded them just once, even if it was under the stress of sheer terror.

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CHAPTER XX

The Society of Fleas

Barby soared gracefully into the air, executed a flawless figure eight, dropped to within two feet of ground level, jumped over Jimmy’s helicopter like Super-girl soaring over an obstacle, and sped like a blond bullet toward her brother. She came to a stop a foot in the air just in front of him, then settled to the ground like down.

Rick, Scotty, Jan, and Jimmy applauded.

“That was great, Barb,” Rick said. His friends were now much more adept than he in handling the rocket belt. The cast on his leg had given way to an elastic bandage, but the colonel-surgeon had been absolutely firm. He could walk-slowly, on level ground-but he could not yet put any stress on the leg.

That meant he couldn’t fly the belt, because there was always the danger of a hard landing, all right for normal bones, but not for one newly knit.

Captain Aster had repaired the belt, putting new pipes in place and repairing the other slight damage.

Rick’s body had cushioned all but the control pipes. Aster himself had taken Rick’s place on Team Five, too, working with Scotty on the dry runs, and then on the first flight of Ramshorn.

From a comfortable chair outside Building Ten, Rick had seen Ramshorn fly. After lift-off, it had made its runs, including one pass over Indian Springs. If Rick had blinked at the wrong moment, he

would have missed it entirely, so fast was the speed of its passage.

It was Jan's turn to fly the belt. Fueling had been reduced to routine, and Jimmy and Scotty had reloaded the tanks with hydrazine and nitrogen in a few minutes.

Rick thought the belt was all right for men, but it looked too bulky and unwieldy on the girls. He began to figure out how to create a less cumbersome model that the girls could have for their own. With their lesser weight, it could be a bit smaller. The tanks could be lighter, maybe of fiberglass.

Captain Aster pulled up in his jeep just as Jan took to the air. He watched with the others as she went up in a spiral, came to a stop about fifty feet in the air, then let herself drop halfway to the ground before she put on thrust and stopped the fall.

Rick's heart leaped into his throat as he watched Jan fall, and he shook his head as she soared upward again. He would have to scold her for taking chances. No, he decided, he wouldn't. Jan knew exactly what she was doing every second. Just the same, he was relieved when she landed in front of him, her dark hair tousled from the wind.

When Scotty and Jimmy had helped her out of the belt, Aster called, "Gather 'round."

The group assembled at Rick's chair and waited expectantly.

Aster ticked off his news. "Item. The Jones Boys and company were indicted this morning by the Federal **Page 82**

grand jury. Seven counts of violating the Espionage Act and the Atomic Energy Act, destruction of Federal property-the forest above the lodge is a national park-and attempted murder. The girls will have to testify at the trial, although their depositions were enough for the indictment."

"We'll be there," Barby promised.

"Item. Ramshorn flies again tomorrow morning. At dawn."

Scotty whistled. "That means we'll have to get to the peak by dark tonight and spend the night on the mountain."

Aster nodded. "Right. While Rick reclines like a rajah on his downy couch at the lodge, we'll be freezing on top of the peak."

Jimmy glanced at his watch. "Time enough for another few flights, then we can fly Rick and the girls back to the lodge. They might even invite us to stay for dinner. We'll only need an hour to load the gear and fly to position."

Jan smiled at Rick. "And to think you told me Jimmy couldn't fly us in the helicopter."

Rick returned the smile. "I didn't know it would turn out like this. And I don't ever want to buy another ticket for the same price." He had been right about the regulations, but the fire and accident were considered an emergency, and no one had declared the emergency formally at an end. So Jimmy continued to carry the girls when he carried Rick, on the grounds that a properly qualified civilian employee rated nursing care. It wasn't strictly according to the book, but the girls had become favorites at Scarlet Lake and no one was apt to raise an objection.

"Consider yourselves invited to dinner," Barby told Aster and Jimmy. "Anything else, Captain?"

"One item more. A question. What animal is the world's best jumper for its size?"

"A kangaroo," Jan offered.

"Frog?" Barby asked.

"Nope. It's the lowly flea. I decided we need to form a society for those who can compete with fleas. In other words, a society for rocket jumpers. I had some membership cards drawn up."

Aster reached into his pocket and produced a stack of cards, which he passed out.

Rick examined his with a grin. On the front was the outline of a flea with a flaming rocket strapped to its back. Superimposed on the outline was the legend:

SOCIETY OF ROCKETING FLEAS

In small print was: "This certifies that _____ is a qualified rocket jumper and a member of this Society."

Rick's name had been hand printed in the blank.

He turned the card over. On the back was the address of the society, given as Building Ten, Indian **Page 83**

Springs, Nevada . Below was a list of officers: Chief Flea Richard Brant

Flea in Charge of Operations Donald Scott She-Fleas in Charge of Morale Janice Miller Barbara Brant

Flea in Charge of Logistics James Taylor

Flea in Charge of Repairs Robert Aster

At the very bottom of the card was the Society's motto: all oh nothing

"That's the way it was," Jan said softly.

Rick looked at the grinning faces around him. "Was and is."

"As Flea in Charge of Operations, I suggest we scratch up a demonstration," Scotty announced. "I will be glad to oblige if the Flea in Charge of Repairs will help refuel the belt."

"As one She-Flea for Morale, I will applaud while you fly," Barby said.

Jan smiled at Rick. "Does my new title mean I have to let you beat me at chess every time?"

"Don't you dare. At the moment it means you have to cheer me up with a Coke from the cooler in the back of the jeep."

The girl bowed gracefully. "Your servant, O Chief Flea!"

Rick grinned happily. Ever since arriving back in the world of consciousness, he had gotten service not even a monarch could afford. Jan and Barby had hovered over him, anticipating his every wish, as though they considered it their life's work. Rick sighed. He was enjoying it, and he couldn't have asked for two better handmaidens, but he knew it was too good to last. Besides, he was impatient at being a semi-invalid. He wanted to become active once more.

He watched as Scotty shot into the air at full thrust. He wanted to use the belt himself. Perhaps he could, in a couple more weeks.

Jan brought him the Coke and her eyes followed his as he watched Scotty. "Never mind," she said.

"You'll be as good as new very soon."

Jan was as good as Scotty in knowing what went on in his mind, Rick thought. "I'm not really upset about being forced to sit on the sidelines for a while," he told her. "If the belt never flew again, it wouldn't really matter. It operated the one time we really needed it."

Scotty landed in time to hear the last remark. "Yes," he said definitely, "and if we ever need it again, I'm going to be ready." He soared into the air once more.

Rick watched, and to himself he vowed that there wouldn't be a second time. From now on, he and Scotty would travel without the girls. It was safer that way.

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THE END

ROCKET JUMPER

A RICK BRANT SCIENCE-ADVENTURE STORY, No. 21

BY JOHN BLAINE

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